TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 0 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | 737 | |
| **Carcass ID Number** | 0184 | 0192 | 0193 | 0195 | 0202 | 0203 | 0211 | 0212 | 0214 | 0221 | 0222 | 0224 | 0225 | 0233 | 0234 | 0242 | 0243 | 0251 | 0253 | 0254 | 0261 | 0262 | 0265 | 0273 | 0282 | Total Tissues/ Tumors |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal muscle | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemangiosarcoma, metastatic, spleen | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Alveolar/bronchiolar adenoma | | | X | | | | | | | | | | | | | X | | X | | | | | | | | 4 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Mediastinum, sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Harderian gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma | | | | X | X | | | | | | | | | X | | | | X | | | | | | | | 8 |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Urinary bladder | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | 47 |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Lymphoma malignant lymphocytic | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymphoma malignant mixed | | | | | | | | | | X | | | | | | | | | X | | | | | | | 5 |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 6.25 ppm**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 0 | 6 | 1 | 2 | 3 | 7 | 4 | 4 | 4 | 5 | 7 | 9 | 9 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 7 | 7 | 9 | 4 | 8 | 2 | 1 | 2 | 4 | 3 | 3 | 4 | 5 | 2 | 0 | 2 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **Carcass ID Number** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 7 | 9 | 8 | 6 | 1 | 3 | 5 | 0 | 5 | 9 | 4 | 2 | 3 | 4 | 4 | 5 | 7 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 5 |
| | 4 | 1 | 1 | 5 | 2 | 4 | 3 | 4 | 2 | 4 | 1 | 5 | 5 | 2 | 5 | 4 | 5 | 2 | 3 | 1 | 3 | 5 | 1 | 3 | 5 |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | M | + | + | M | + | + | + |
| Gallbladder | A | A | + | A | + | + | M | + | + | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | + |
| Intestine large | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, cecum | A | A | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, colon | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, rectum | M | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine small | A | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine small, duodenum | A | + | + | A | + | + | A | + | + | I | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine small, ileum | M | + | + | A | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Intestine small, jejunum | A | A | + | A | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Liver | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hepatocellular carcinoma | | X | | | | | X | | X | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma, multiple | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Hepatocellular adenoma | | | X | | | | | | | | | | | X | | | | | | | | | | | |
| Hepatocellular adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | + | + | | | | | | | + | + | | + | | |
| Fat, sarcoma, metastatic, uterus | | | | | | | | | | | | | | | | | | | | X | | | | | |
| Pancreas | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, forestomach | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, glandular | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Tooth | | | + | | | + | | | | | | | | | | | | | | | | | | | |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood vessel | | | | | | | | | | + | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | X | | | | | | | | | | | | | |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal gland, cortex | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Histiocytic sarcoma | | X | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland, medulla | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + |
| Islets, pancreatic | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid gland | M | + | + | + | + | + | + | + | M | + | + | + | M | M | M | M | M | + | M | + | + | + | + | + | M |
| Pituitary gland | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars distalis, adenoma | | | | | | | | | | X | X | | | | | | | X | X | | | | | | X |
| Thyroid gland | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Follicular cell, adenoma | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Follicular cell, carcinoma | | | | | | | | | | | | | | | | | | | X | | | | | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 6.25 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | |
| **Carcass ID Number** | 0462 | 0463 | 0464 | 0471 | 0482 | 0483 | 0485 | 0495 | 0502 | 0503 | 0505 | 0511 | 0513 | 0515 | 0523 | 0524 | 0532 | 0533 | 0542 | 0543 | 0551 | 0554 | 0561 | 0564 | 0565 | Total Tissues/ Tumors |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | M | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | M | + | + | M | + | + | M | 41 |
| Gallbladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Intestine large | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine large, cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine large, colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine large, rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | 47 |
| Intestine small | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine small, duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Adenoma | | | | | | | | | | | | | | | X | | | | | | | | | | | 1 |
| Intestine small, ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Intestine small, jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Carcinoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hepatocellular carcinoma | | | | | | | | | | | | X | | | | | | | | X | | | | | | 5 |
| Hepatocellular carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hepatocellular adenoma | | | | X | | X | | | | | | X | X | | | | | | X | X | | | X | | | 9 |
| Hepatocellular adenoma, multiple | | | | | | | X | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Mesentery | + | | | | | | + | | | | | | + | + | | | + | + | | | + | | | | + | 13 |
| Fat, sarcoma, metastatic, uterus | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Salivary glands | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Stomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Stomach, forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Stomach, glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Tooth | | | + | | | | | | | + | + | | | | | | | | | | | | | | | 5 |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood vessel | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adrenal gland, cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Adrenal gland, medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Islets, pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Parathyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 40 |
| Pituitary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Pars distalis, adenoma | | X | | X | | X | | | X | | X | | | | | X | | | | | | X | | | | 12 |
| Thyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Follicular cell, carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 6.25 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 0 | 6 | 1 | 2 | 3 | 7 | 4 | 4 | 4 | 5 | 7 | 9 | 9 | 2 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 3 | 3 |
| | 7 | 7 | 9 | 4 | 8 | 2 | 1 | 2 | 4 | 3 | 3 | 4 | 5 | 2 | 0 | 2 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **Carcass ID Number** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 7 | 9 | 8 | 6 | 1 | 3 | 5 | 0 | 5 | 9 | 4 | 2 | 3 | 4 | 4 | 5 | 7 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 5 |
| | 4 | 1 | 1 | 5 | 2 | 4 | 3 | 4 | 2 | 4 | 1 | 5 | 5 | 2 | 5 | 4 | 5 | 2 | 3 | 1 | 3 | 5 | 1 | 3 | 5 |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clitoral gland | | | | | | | | M | | | | | | | | | | | | | | | | | |
| Ovary | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Granular cell tumor benign | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangioma | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Leiomyosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyp stromal | | | | | | | | | | | | | | | | | X | | | | | | | | |
| Sarcoma | | | | | | | | | | | | | | | | | | | | X | | | | | |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangioma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Renal, histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Lymph node, bronchial | M | M | + | + | + | + | + | + | + | + | M | + | + | M | + | + | + | + | + | + | + | + | M | + | + |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Lymph node, mandibular | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | M |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Lymph node, mediastinal | M | + | + | + | + | + | + | + | M | + | + | + | + | M | + | + | + | + | M | M | + | + | M | + | M |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Lymph node, mesenteric | M | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + |
| Histiocytic sarcoma | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| Spleen | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangioma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| Thymus | + | M | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | M | + | + | + | M | + | + | + |
| Adenoacanthoma | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Adenocarcinoma | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Subcutaneous tissue, hemangiosarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, sarcoma | | | | | | | | X | | | | | | | | | | | | | | | | | |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | X | | | | | | | | | | | |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | X | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 6.25 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | |
| **Carcass ID Number** | 0462 | 0463 | 0464 | 0471 | 0482 | 0483 | 0485 | 0495 | 0502 | 0503 | 0505 | 0511 | 0513 | 0515 | 0523 | 0524 | 0532 | 0533 | 0542 | 0543 | 0551 | 0554 | 0561 | 0564 | 0565 | Total Tissues/ Tumors |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clitoral gland | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenoma | | | X | | | | | | | | | | | X | | | | X | | | | | X | | | 4 |
| Granular cell tumor benign | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenocarcinoma | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| Hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Leiomyosarcoma | | | | | | | | | | | | | | | | | X | | | | | | | | | 1 |
| Polyp stromal | X | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Renal, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node, bronchial | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | M | + | + | + | + | M | + | + | + | 42 |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node, mandibular | + | + | + | M | + | + | + | + | M | M | + | + | + | + | + | + | M | M | + | + | + | + | + | + | + | 42 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node, mediastinal | + | M | + | + | + | M | M | M | M | M | M | + | M | M | + | + | M | + | M | + | M | M | + | + | M | 29 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node, mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemangiosarcoma | | | | | X | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | 46 |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Adenoacanthoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | X | | | | 2 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Subcutaneous tissue, hemangiosarcoma | | | | | X | | | | | | | | | | | | | | | | | | | | | 2 |
| Subcutaneous tissue, sarcoma | | | | | | | | | | | | | | | | | | X | | | | | | | | 2 |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 6.25 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 0 | 6 | 1 | 2 | 3 | 7 | 4 | 4 | 4 | 5 | 7 | 9 | 9 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 7 | 7 | 9 | 4 | 8 | 2 | 1 | 2 | 4 | 3 | 3 | 4 | 5 | 2 | 0 | 2 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **Carcass ID Number** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 7 | 9 | 8 | 6 | 1 | 3 | 5 | 0 | 5 | 9 | 4 | 2 | 3 | 4 | 4 | 5 | 7 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 5 |
| | 4 | 1 | 1 | 5 | 2 | 4 | 3 | 4 | 2 | 4 | 1 | 5 | 5 | 2 | 5 | 4 | 5 | 2 | 3 | 1 | 3 | 5 | 1 | 3 | 5 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adenocarcinoma, multiple | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adenocarcinoma, metastatic, uterus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar adenoma | | | | X | | | | | | | | | | | | X | | | | X | | | | | |
| Alveolar/bronchiolar carcinoma | | | X | | | | | | | | | | | | | | | | X | | | | | | |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Histiocytic sarcoma | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| Mediastinum, adenocarcinoma, metastatic, lung | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Nose | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian gland | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Adenoma | | | | | | | | | | | | | | X | | | | | | | | X | | X | |
| Bilateral, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Histiocytic sarcoma | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| Urinary bladder | A | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| Lymphoma malignant lymphocytic | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Lymphoma malignant mixed | | | | | | | | | | | | | | | X | | | | | | X | | | | |

**Table B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 6.25 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | 736 | |
| **Carcass ID Number** | 0462 | 0463 | 0464 | 0471 | 0482 | 0483 | 0485 | 0495 | 0502 | 0503 | 0505 | 0511 | 0513 | 0515 | 0523 | 0524 | 0532 | 0533 | 0542 | 0543 | 0551 | 0554 | 0561 | 0564 | 0565 | Total Tissues/ Tumors |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma | | | | | X | | | | | | | | | | | | | | | | | | | | | 1 |
| Adenocarcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | X | | | | 1 |
| Adenocarcinoma, metastatic, uterus | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| Alveolar/bronchiolar adenoma | | | X | | | | | X | | X | | | | X | X | | | | X | | | X | | X | | 11 |
| Alveolar/bronchiolar carcinoma | | | | | | | | | | | | | | | | | | | | | | | | X | | 3 |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Mediastinum, adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Adenoma | X | | X | | X | | | | | | | | | | X | | | X | | | | | | X | | 9 |
| Bilateral, adenoma | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Urinary bladder | + | M | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Lymphoma malignant lymphocytic | | | | | | | | | | | | | X | | | | | | | | | X | | | | 3 |
| Lymphoma malignant mixed | X | X | X | X | X | | | | | X | | | | X | | | | | | | | | | | | 9 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 20 ppm**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 1 | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 9 | 7 | 6 | 9 | 0 | 3 | 4 | 4 | 6 | 7 | 0 | 0 | 2 | 4 | 4 | 5 | 5 | 5 | 5 | 7 | 7 | 8 | 8 | 8 | 9 |
| | 4 | 2 | 5 | 2 | 7 | 3 | 1 | 1 | 9 | 3 | 0 | 4 | 5 | 5 | 9 | 0 | 3 | 3 | 7 | 7 | 7 | 1 | 1 | 6 | 1 |
| **Carcass ID Number** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 7 | 8 | 7 | 7 | 8 | 7 | 7 | 8 | 7 | 8 | 8 | 7 |
| | 1 | 4 | 8 | 8 | 4 | 4 | 8 | 8 | 6 | 8 | 9 | 3 | 2 | 1 | 3 | 4 | 5 | 1 | 6 | 2 | 0 | 2 | 0 | 1 | 5 |
| | 3 | 1 | 5 | 4 | 1 | 5 | 1 | 3 | 4 | 2 | 4 | 4 | 4 | 2 | 1 | 4 | 5 | 1 | 2 | 1 | 4 | 4 | 2 | 4 | 3 |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder | + | A | + | A | A | + | + | A | + | + | + | + | + | + | A | A | + | + | + | A | A | + | + | + | A |
| Intestine large | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Intestine large, cecum | + | A | + | + | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Intestine large, colon | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Intestine large, rectum | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Intestine small | + | A | A | + | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Intestine small, duodenum | + | A | A | + | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | A | + | + | + | + |
| Intestine small, ileum | + | A | A | + | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | A | + | + | + | A |
| Intestine small, jejunum | + | A | A | A | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Carcinoma, metastatic, parathyroid gland | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Hepatocellular carcinoma | | | | | | | | | | | X | | | | X | | X | | | | | | | X | |
| Hepatocellular carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Hepatocellular adenoma | | | X | | | | | | | | X | | | X | | | | | | | | | | | |
| Hepatocellular adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | X | | | | | | X | | X | | | | | | | | X | | X | | | |
| Mesentery | | | | | | | | + | | + | | + | | | | | | | | | | | | + | |
| Fat, histiocytic sarcoma | | | | | | | | | | X | | X | | | | | | | | | | | | | |
| Pancreas | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Stomach, forestomach | + | M | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Squamous cell carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell papilloma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Tooth | | | | + | | | | | | | | | | | | | | | | | | | | | |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | X | | | | | | | | X | | | | | |
| Pericardium, leiomyosarcoma, metastatic, uterus | | | | | | | | | | | | | X | | | | | | | | | | | | |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Adrenal gland, cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | X | | | |
| Adrenal gland, medulla | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Pheochromocytoma malignant | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pheochromocytoma benign | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Islets, pancreatic | M | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Parathyroid gland | M | + | + | + | M | + | M | + | M | + | M | + | + | + | + | + | M | + | + | + | M | M | + | M | M |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Pituitary gland | + | + | + | + | + | + | + | + | + | + | + | M | I | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars distalis, adenoma | | | | | | | | | | | | | | X | | | | | X | | | | | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 20 ppm**
(continued)

| Number of Days on Study | 697 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carcass ID Number | 0734 | 0711 | 0722 | 0725 | 0742 | 0743 | 0752 | 0754 | 0761 | 0765 | 0772 | 0773 | 0801 | 0803 | 0805 | 0812 | 0813 | 0821 | 0822 | 0823 | 0825 | 0833 | 0835 | 0842 | 0844 | | Total Tissues/ Tumors |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | | 47 |
| Gallbladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 41 |
| Intestine large | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 47 |
| Intestine large, cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 46 |
| Intestine large, colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 47 |
| Intestine large, rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 47 |
| Intestine small | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 45 |
| Intestine small, duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 44 |
| Intestine small, ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 43 |
| Intestine small, jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 44 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 50 |
| Carcinoma, metastatic, parathyroid gland | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hepatocellular carcinoma | | | | | | | X | X | | | | | | | | | | | | | | X | | | | | 7 |
| Hepatocellular carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hepatocellular adenoma | | | | | | | | | | | X | | | | | | X | | X | | | X | X | | | | 8 |
| Hepatocellular adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| Mesentery | | + | | + | | + | | | | | + | + | | | + | + | | + | | | + | | + | | | | 14 |
| Fat, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 47 |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 50 |
| Stomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 48 |
| Stomach, forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 47 |
| Squamous cell carcinoma | | | | | | | | | | | | | | | | X | | | | | | | | | | | 1 |
| Squamous cell papilloma | | | | | | | | | | | | | | X | | | | | | X | | | | | | | 2 |
| Stomach, glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 48 |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 50 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Pericardium, leiomyosarcoma, metastatic, uterus | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 48 |
| Adrenal gland, cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 48 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Adrenal gland, medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 47 |
| Pheochromocytoma malignant | | | | | | | | | | | | | | | | | | | | X | | | | | | | 1 |
| Pheochromocytoma benign | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Islets, pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 46 |
| Parathyroid gland | M | M | + | + | + | + | + | M | + | + | + | + | + | + | + | + | M | + | + | M | M | + | M | + | + | | 33 |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pituitary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 48 |
| Pars distalis, adenoma | | | | X | X | | | | | | | | | X | | | | | | | | | | | | | 5 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 20 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 194 | 272 | 365 | 492 | 507 | 533 | 541 | 541 | 569 | 573 | 600 | 604 | 625 | 644 | 649 | 650 | 653 | 657 | 657 | 677 | 677 | 681 | 681 | 686 | 691 |
| **Carcass ID Number** | 0713 | 0814 | 0785 | 0784 | 0774 | 0774 | 0781 | 0783 | 0776 | 0778 | 0779 | 0883 | 0822 | 0871 | 0873 | 0874 | 0875 | 0881 | 0876 | 0872 | 0880 | 0872 | 0880 | 0882 | 0875 |
| **Endocrine System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + |
| Carcinoma, metastatic, parathyroid gland | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | | | X | | | | | | |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Granulosa cell tumor benign | | | | | | | | | | | | | | | | | | | | X | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | X | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | X | | | | | | | | X | | | | | |
| Leiomyosarcoma | | | | | | | | | | | | | X | | | | | | | | | | | | |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Iliac, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | X | | | | | |
| Renal, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, bronchial | + | M | + | + | + | M | + | + | + | + | + | M | + | M | + | + | + | + | + | M | + | M | + | M | + |
| Histiocytic sarcoma | | | | X | | | | | | X | | | | | | | | | | | | | | | |
| Lymph node, mandibular | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M |
| Histiocytic sarcoma | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Lymph node, mediastinal | + | + | M | + | + | M | + | + | + | + | + | + | + | M | + | M | + | M | + | A | + | + | + | M | + |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Lymph node, mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | X | | X | | | | | | | | | | X | | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Histiocytic sarcoma | | | | X | | | | | | | | | | | | | | | | | | X | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | I | + | + | A | + | + | + | + | M | + | M | + | + | + |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Adenoacanthoma | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Adenocarcinoma | | | | | | | | | | | | | | X | | | | | X | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Subcutaneous tissue, hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, neurofibrosarcoma | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, sarcoma | | | | | | | | | | | | | | | | X | | X | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 20 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 697 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 |
| **Carcass ID Number** | 0734 | 0711 | 0722 | 0725 | 0742 | 0743 | 0752 | 0754 | 0761 | 0765 | 0772 | 0773 | 0801 | 0803 | 0805 | 0812 | 0813 | 0821 | 0822 | 0823 | 0825 | 0833 | 0835 | 0842 | 0844 | **Total Tissues/ Tumors** |
| **Endocrine System (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Carcinoma, metastatic, parathyroid gland | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| Granulosa cell tumor benign | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Leiomyosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Iliac, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Renal, histiocytic sarcoma | X | | X | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Lymph node, bronchial | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 42 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Lymph node, mandibular | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | 46 |
| Histiocytic sarcoma | X | | X | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node, mediastinal | M | M | + | + | M | + | M | + | + | M | + | + | + | + | + | M | + | + | + | M | M | + | + | M | M | 33 |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | X | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node, mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Histiocytic sarcoma | X | | X | | | | | | | | | | | | | | | | | | | | | | | 5 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Histiocytic sarcoma | X | | X | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Thymus | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenoacanthoma | | | | | | | | | X | | | | | | | | | | | | | | | | | 2 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Subcutaneous tissue, hemangioma | | | | | | | | | | | | | | | | | | | | X | | | | | | 1 |
| Subcutaneous tissue, hemangiosarcoma | | | | | | | | X | | | | | | X | | | | | | | | | | | | 2 |
| Subcutaneous tissue, neurofibrosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Subcutaneous tissue, sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 20 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 194 | 272 | 365 | 692 | 707 | 733 | 741 | 741 | 769 | 773 | 600 | 604 | 625 | 644 | 649 | 650 | 653 | 653 | 657 | 677 | 677 | 681 | 681 | 686 | 691 |
| **Carcass ID Number** | 0713 | 0814 | 0785 | 0774 | 0741 | 0745 | 0781 | 0783 | 0766 | 0782 | 0779 | 0833 | 0824 | 0771 | 0783 | 0745 | 0775 | 0781 | 0762 | 0772 | 0780 | 0772 | 0782 | 0784 | 0753 |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal muscle | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | X | | | | | | | | | | | | X | | | |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | X | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar adenoma | | | | X | | | | | | | | X | | | | | X | | | | | | | | X |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Carcinoma, metastatic, parathyroid gland | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | X | | | | X | | | | |
| Histiocytic sarcoma | | | | X | | | | | | X | | X | | | | | | | | | | X | | | |
| Pheochromocytoma malignant, metastatic, adrenal gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, mediastinum, hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, hemangiosarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, leiomyosarcoma, metastatic, uterus | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Nose | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + |
| Trachea | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ear | | | | | | | | | | | | | | | | | | | | A | | | | | |
| Eye | | | | | | | + | | | | | | | | | | | | | | | M | | | |
| Harderian gland | M | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | X | | | | | | | | | | | | | | | | | | |
| Adenoma | | | | | | | | | X | | X | | | | | | | | | | | | | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 20 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Days on Study | 697 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | |
| Carcass ID Number | 0734 | 0711 | 0722 | 0725 | 0742 | 0743 | 0752 | 0754 | 0761 | 0765 | 0772 | 0773 | 0801 | 0803 | 0805 | 0812 | 0813 | 0821 | 0822 | 0823 | 0825 | 0833 | 0835 | 0842 | 0844 | Total Tissues/ Tumors |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal muscle | | | | | | | | + | | | | | | | | | | | | | | | | | | 1 |
| Adenocarcinoma, metastatic, lung | | | | | | | | X | | | | | | | | | | | | | | | | | | 1 |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | X | | | | | | | | | | | | | | | | | | 1 |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma | | | | | | | X | X | | | | | | | | | | | | | | | | | | 2 |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Alveolar/bronchiolar adenoma | | | | | X | | | X | X | | | | X | | | | | | | | | X | | | | 9 |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | | X | | | X | | | | | X | | | | | | | 3 |
| Alveolar/bronchiolar carcinoma | | | | X | X | | | X | | X | | | | | | | | | X | X | | X | X | | X | 10 |
| Carcinoma, metastatic, parathyroid gland | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | X | X | | | | | | | | | | | | | | X | | | | 5 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| Pheochromocytoma malignant, metastatic, adrenal gland | | | | | | | | | | | | | | | | | | | | X | | | | | | 1 |
| Fat, mediastinum, hemangioma | | | | | | | | | | | | | | | | | | | | X | | | | | | 1 |
| Mediastinum, adenocarcinoma, metastatic, lung | | | | | | | X | X | | | | | | | | | | | | | | | | | | 2 |
| Mediastinum, hemangiosarcoma, metastatic, skin | | | | | | | | | | | | | | X | | | | | | | | | | | | 1 |
| Mediastinum, hepatocellular carcinoma, metastatic, liver | | | | | | | | X | | | | | | | | | | | | | | | | | | 1 |
| Mediastinum, leiomyosarcoma, metastatic, uterus | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ear | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | + | | | | | | | | | | | | | 2 |
| Harderian gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Adenoma | | | | | | | | | X | | X | | X | | | | | | | | | | X | | | 6 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 20 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 194 | 272 | 365 | 492 | 507 | 533 | 541 | 541 | 569 | 573 | 600 | 604 | 625 | 645 | 649 | 650 | 653 | 653 | 657 | 677 | 677 | 681 | 681 | 686 | 691 |
| **Carcass ID Number** | 0713 | 0814 | 0785 | 0784 | 0774 | 0744 | 0781 | 0773 | 0776 | 0782 | 0779 | 0833 | 0822 | 0721 | 0783 | 0774 | 0755 | 0781 | 0762 | 0721 | 0780 | 0724 | 0802 | 0814 | 0755 |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Carcinoma, metastatic, parathyroid gland | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Histiocytic sarcoma | | | | X | | | | | | X | | X | | | | | | | | | | X | | | |
| Urinary bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | X | | | | | | X | | X | | | | | | | | X | | X | | | |
| Lymphoma malignant lymphocytic | | | | | | X | | X | | | | | | | | | | | | | | | | | X |
| Lymphoma malignant mixed | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphoma malignant undifferentiated cell type | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 20 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 697 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | 734 | |
| **Carcass ID Number** | 0734 | 0711 | 0722 | 0725 | 0742 | 0743 | 0752 | 0754 | 0761 | 0765 | 0772 | 0773 | 0801 | 0803 | 0805 | 0812 | 0813 | 0821 | 0822 | 0823 | 0825 | 0833 | 0835 | 0842 | 0844 | Total Tissues/ Tumors |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Adenocarcinoma, metastatic, lung | | | | | | | | X | | | | | | | | | | | | | | | | | | 1 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Carcinoma, metastatic, parathyroid gland | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| Urinary bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | X | | X | | | | | | | | | | | | | | | | | | | | | | | 7 |
| Lymphoma malignant lymphocytic | | | | | | | | | | | X | | | | | | | | | | X | | | X | | 6 |
| Lymphoma malignant mixed | | | | | | | X | | X | | | | | | | | | | X | | | | X | | | 4 |
| Lymphoma malignant undifferentiated cell type | | | | | | | | | | | | | | | | | | | | X | | | | | | 1 |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 62.5 ppm**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 387 | 392 | 407 | 418 | 443 | 443 | 485 | 485 | 524 | 532 | 539 | 544 | 546 | 569 | 570 | 579 | 586 | 594 | 597 | 608 | 610 | 625 | 625 | 639 | 645 |
| **Carcass ID Number** | 113 | 101 | 187 | 063 | 083 | 103 | 015 | 017 | 111 | 102 | 303 | 104 | 006 | 029 | 095 | 095 | 033 | 094 | 102 | 082 | 045 | 053 | 085 | 051 | 043 |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | M | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder | + | + | + | I | + | + | + | + | A | + | M | + | + | + | + | + | + | + | + | + | M | + | + | A | + |
| Intestine large | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, cecum | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, colon | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, rectum | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine small | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine small, duodenum | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + |
| Carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leiomyosarcoma | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Intestine small, ileum | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine small, jejunum | + | + | + | + | + | + | + | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma | | | | | | | | | | | | | X | | | X | | | | | X | | X | | |
| Hepatocellular adenoma | | | | | | | X | | | | | | | | | | | | | | | | | | X |
| Hepatocellular adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | X | | | X | | | | | | | | | | | | | |
| Leiomyosarcoma, metastatic, intestine small | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | | | | + | | | | | | | | | + | | + | | | | + | | + | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, leiomyosarcoma, metastatic, intestine small | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Fat, sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Acinus, carcinoma, metastatic, ovary | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Acinus, hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, leiomyosarcoma, metastatic, intestine small | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Acinus, sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, forestomach | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell papilloma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, glandular | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood vessel | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 62.5 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 649 | 650 | 653 | 653 | 658 | 664 | 665 | 670 | 680 | 698 | 699 | 707 | 722 | 723 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | |
| **Carcass ID Number** | 1023 | 1032 | 1011 | 1112 | 1084 | 1024 | 1033 | 1042 | 1052 | 1044 | 1115 | 1114 | 1041 | 1091 | 1091 | 1005 | 1035 | 1054 | 1061 | 1065 | 1093 | 1104 | 1123 | 1124 | 1125 | Total Tissues/ Tumors |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | M | + | + | + | + | + | + | M | M | + | + | + | + | + | + | + | + | + | + | 45 |
| Gallbladder | A | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | 43 |
| Intestine large | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine large, cecum | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine large, colon | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine large, rectum | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine small | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine small, duodenum | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Carcinoma, multiple | | | X | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Leiomyosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Intestine small, ileum | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine small, jejunum | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| Hemangiosarcoma, metastatic, skin | | | | | | | X | | | | | | | | | | | | | | | | | | | 1 |
| Hepatocellular carcinoma | | | | | X | | | | X | | | X | | | | | | | X | | X | | | | | 9 |
| Hepatocellular adenoma | | | | X | | | | | X | X | | X | | | | | | | X | | | | X | X | | 9 |
| Hepatocellular adenoma, multiple | | | | | X | | X | X | | | | | | | X | | | | | | | | | | X | 5 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 3 |
| Leiomyosarcoma, metastatic, intestine small | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Mesentery | | | | | | | | | | | + | | + | | | | | + | | + | | | | | | 9 |
| Histiocytic sarcoma | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| Fat, leiomyosarcoma, metastatic, intestine small | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Fat, sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pancreas | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Acinus, carcinoma, metastatic, ovary | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Acinus, hemangioma | | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |
| Acinus, histiocytic sarcoma | | | | | | | | | | | X | | X | | | | | | | | | | | | | 2 |
| Acinus, leiomyosarcoma, metastatic, intestine small | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Acinus, sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Stomach | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Stomach, forestomach | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Histiocytic sarcoma | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| Squamous cell carcinoma | | | | | | | | | | | | | | X | | | | | | | | | | | | 1 |
| Squamous cell papilloma | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| Stomach, glandular | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Tongue | | | | | | | | | | | | | | + | | | | | | | | | | | | 1 |
| Squamous cell carcinoma | | | | | | | | | | | | | | X | | | | | | | | | | | | 1 |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood vessel | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hemangiosarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 62.5 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 387 | 392 | 407 | 418 | 443 | 443 | 485 | 485 | 524 | 532 | 533 | 544 | 546 | 569 | 570 | 579 | 586 | 594 | 597 | 608 | 610 | 625 | 625 | 639 | 644 |
| **Carcass ID Number** | 1013 | 1081 | 1074 | 1063 | 1083 | 1103 | 1015 | 1017 | 1011 | 1012 | 1034 | 1010 | 1026 | 1029 | 1095 | 1095 | 1031 | 1094 | 1021 | 1082 | 1004 | 1005 | 1085 | 1051 | 1043 |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal gland, cortex | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal gland, medulla | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, pancreatic | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Parathyroid gland | + | M | + | + | + | + | + | + | + | + | A | + | + | + | + | + | M | + | + | + | + | + | M | M | + |
| Pituitary gland | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars distalis, adenoma | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Thyroid gland | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Follicular cell, adenoma | | | | | | | | | | | | | | X | | | | | | | | | | | |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tissue NOS | | | | | | | | | | | + | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carcinoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Granulosa cell tumor malignant | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Granulosa cell tumor benign | | | | | | | | | | | | | | | | | | | | X | | | | | |
| Hemangioma | | | | | | | | | | | | | | | | | | X | | | | | | X | |
| Histiocytic sarcoma | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Leiomyosarcoma, metastatic, intestine small | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Luteoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed tumor benign | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leiomyoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyp stromal | | | | | | | | | | | | | | | | | X | | | | | | | | |
| Sarcoma stromal | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Cervix, hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vagina | | | | | | | | + | | | | | | + | | | | | | | | | | | |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leiomyosarcoma | | | | | | | | X | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma | | | | | | | | | | | | | | X | | | | | | | | | | | |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph node, bronchial | + | + | + | M | + | + | + | + | + | + | + | M | + | + | + | + | + | M | + | + | + | M | M | + | M |
| Carcinoma, metastatic, ovary | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | X | | | | | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 62.5 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Days on Study | 649 | 650 | 653 | 653 | 658 | 664 | 665 | 670 | 800 | 898 | 998 | 707 | 722 | 723 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | |
| Carcass ID Number | 1023 | 1032 | 1011 | 1112 | 1084 | 1024 | 1003 | 1042 | 1002 | 1004 | 1115 | 1114 | 1041 | 1091 | 1091 | 1005 | 1035 | 1055 | 1061 | 1065 | 1093 | 1104 | 1123 | 1124 | 1125 | Total Tissues/ Tumors |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adrenal gland, cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adrenal gland, medulla | A | + | + | + | + | + | + | + | + | I | + | + | I | + | + | + | + | + | + | + | + | I | + | + | + | 45 |
| Islets, pancreatic | A | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Parathyroid gland | M | + | + | + | + | + | M | + | + | + | M | M | M | + | + | + | M | + | + | + | + | + | + | + | + | 39 |
| Pituitary gland | I | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Pars distalis, adenoma | | X | | | | | | | | | | | | | | X | | | | | | | X | | | 4 |
| Thyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | X | | | | | | | | | 2 |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tissue NOS | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma | | | | | | | X | | | | | | | | | | X | | | | | | | | | 2 |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Granulosa cell tumor malignant | | | | | | | | | | | | | X | | | | | X | | | | | | | | 3 |
| Granulosa cell tumor benign | X | | X | | | | | X | | | X | | | | | | | | | | | | | | X | 6 |
| Hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 2 |
| Leiomyosarcoma, metastatic, intestine small | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Luteoma | | | | | | | | | | | | | | | | | | | | | | X | | | | 1 |
| Mixed tumor benign | | | | | | X | | | | | | | | | | X | | | | | | | | | | 2 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | X | | | X | | 2 |
| Histiocytic sarcoma | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| Leiomyoma | | X | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Polyp stromal | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Sarcoma stromal | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Cervix, hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | X | | | 1 |
| Vagina | | | | | | | | | | | | | | | | | | | | | | | + | | | 3 |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | X | | | 1 |
| Leiomyosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Squamous cell carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hemangiosarcoma, metastatic, skin | | | | | | | X | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph node, bronchial | + | M | M | + | + | + | M | + | + | M | + | M | + | + | + | + | + | + | + | M | + | + | + | + | + | 38 |
| Carcinoma, metastatic, ovary | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemangiosarcoma, metastatic, heart | X | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 62.5 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 387 | 392 | 407 | 418 | 443 | 443 | 485 | 485 | 524 | 532 | 539 | 544 | 546 | 569 | 570 | 579 | 586 | 594 | 597 | 608 | 610 | 625 | 625 | 639 | 645 |
| **Carcass ID Number** | 113 | 101 | 087 | 063 | 083 | 103 | 105 | 071 | 111 | 112 | 134 | 101 | 102 | 092 | 095 | 095 | 131 | 094 | 102 | 082 | 045 | 053 | 055 | 051 | 043 |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mandibular | + | + | + | M | + | M | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | I | + | + |
| Lymph node, mediastinal | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | M | + | + | M | + | M | + | + | M |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Carcinoma, metastatic, ovary | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Carcinoma, metastatic, ovary | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | X | | | X | | | | | | | | | | | | | |
| Leiomyosarcoma, metastatic, intestine small | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | X | | | X | | | | | | | | | | | | | |
| Thymus | I | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | M | + | + |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoacanthoma | | | | | | | | | | | | | | | | | X | | | | | | | | X |
| Adenocarcinoma | | X | | | | | | | | | | | | X | | | X | X | | X | | X | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Subcutaneous tissue, hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, sarcoma | | | | | | | | | | | | | | | | | | | X | | | | X | | |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skeletal muscle | | | | + | | | | | | | | | | | | | | | | | | | | | |
| Diaphragm, leiomyosarcoma, metastatic, intestine small | | | | X | | | | | | | | | | | | | | | | | | | | | |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | X | | | | | | | | | | | | | |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | X | | | | | | | | |
| Alveolar/bronchiolar adenoma | | | | | | X | | | X | | | | | | | | X | | | X | | X | | | |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma | | | | | | | | | | X | | | X | | | | | X | | | | | | | |
| Alveolar/bronchiolar carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | X |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 62.5 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 649 | 650 | 653 | 653 | 658 | 664 | 665 | 670 | 680 | 698 | 698 | 707 | 722 | 723 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | |
| **Carcass ID Number** | 1023 | 1032 | 1011 | 1012 | 1084 | 1024 | 1033 | 1042 | 1052 | 1044 | 1115 | 1114 | 1041 | 1091 | 1091 | 1095 | 1003 | 1054 | 1061 | 1065 | 1093 | 1094 | 1123 | 1124 | 1125 | Total Tissues/ Tumors |
| **Hematopoeitic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mandibular | + | M | + | M | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | 43 |
| Lymph node, mediastinal | M | + | + | M | + | M | + | + | M | + | + | + | + | + | M | M | M | + | + | + | + | + | M | + | M | 36 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Carcinoma, metastatic, ovary | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |
| Lymph node, mesenteric | A | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Carcinoma, metastatic, ovary | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 3 |
| Leiomyosarcoma, metastatic, intestine small | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Spleen | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 3 |
| Thymus | + | + | + | + | M | + | M | + | + | + | + | I | M | M | + | M | + | + | + | + | + | + | + | + | + | 41 |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoacanthoma | | | | X | | | | | | | | | X | | | | | | | X | X | | | | | 6 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Subcutaneous tissue, hemangioma | | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| Subcutaneous tissue, hemangiosarcoma | | | | | | | X | | | | | | | X | | | | | | | | | | | | 2 |
| Subcutaneous tissue, sarcoma | | | | X | | X | | | | X | | | | | | | | | | | | | | | | 5 |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma, metastatic, skin | | | | | | | X | | | | | | | | | | | | | | | | | | | 1 |
| Skeletal muscle | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Diaphragm, leiomyosarcoma, metastatic, intestine small | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 2 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | I | + | + | 47 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 2 |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Alveolar/bronchiolar adenoma | X | X | X | | X | | | | | | | X | X | | X | | | | | X | | X | | | | 14 |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | X | | | | X | | | | | | | | X | | | | | | | 3 |
| Alveolar/bronchiolar carcinoma | | | | | | | | | | | | | | | X | | | X | | | | | | | | 5 |
| Alveolar/bronchiolar carcinoma, multiple | | | | | X | | | | | | | | | | | | | | | | | | | | | 2 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 62.5 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 8 | 9 | 0 | 1 | 4 | 4 | 8 | 8 | 2 | 3 | 3 | 4 | 4 | 6 | 7 | 7 | 8 | 9 | 9 | 0 | 1 | 2 | 2 | 3 | 4 |
| | 7 | 2 | 7 | 8 | 3 | 3 | 5 | 5 | 4 | 2 | 9 | 4 | 6 | 9 | 0 | 9 | 6 | 4 | 7 | 8 | 0 | 5 | 5 | 9 | 5 |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 8 | 7 | 6 | 8 | 0 | 1 | 7 | 1 | 2 | 3 | 0 | 6 | 9 | 9 | 9 | 3 | 9 | 0 | 8 | 4 | 5 | 8 | 5 | 4 |
| | 3 | 1 | 4 | 3 | 3 | 3 | 5 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 5 | 5 | 1 | 4 | 2 | 2 | 5 | 3 | 5 | 1 | 3 |
| **Respiratory System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lung (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carcinoma, metastatic, ovary | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Granulosa cell tumor malignant, metastatic, ovary | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | X | | | X | | | | | | | | | | | | | |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Mediastinum, alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Mediastinum, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Trachea | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | + | | | | | | | | | | | | + | |
| Harderian gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | X | | X | | | X | | | | | | | | | X | |
| Bilateral, adenoma | | | | | | | | | | | | | | | | | | | | | X | | | | |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Urinary bladder | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | I | + |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | X | | | X | | | | | | | | | | | | | |
| Lymphoma malignant | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Lymphoma malignant lymphocytic | | | X | | | | | | | | | | | | X | | | | | | | | | | |
| Lymphoma malignant mixed | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphoma malignant undifferentiated cell type | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 62.5 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Days on Study | 649 | 650 | 653 | 653 | 658 | 664 | 665 | 670 | 680 | 698 | 698 | 707 | 722 | 723 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | |
| Carcass ID Number | 1023 | 1032 | 1011 | 1112 | 1084 | 1024 | 1033 | 1042 | 1052 | 1044 | 1115 | 1114 | 1041 | 1009 | 1091 | 1005 | 1035 | 1054 | 1061 | 1065 | 1093 | 1104 | 1123 | 1124 | 1125 | Total Tissues/ Tumors |
| **Respiratory System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lung (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carcinoma, metastatic, ovary | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Granulosa cell tumor malignant, metastatic, ovary | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| Hepatocellular carcinoma, metastatic, liver | | | | | X | | | | | | | X | | | | | | | | | | | | | | 2 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 3 |
| Sarcoma, metastatic, skin | | | | | | | | | | X | | | | | | | | | | | | | | | | 1 |
| Mediastinum, adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Mediastinum, alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Mediastinum, hemangiosarcoma, metastatic, heart | X | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Harderian gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenoma | X | | | | X | | | X | X | | | | | X | X | X | | | X | | X | | | | | 13 |
| Bilateral, adenoma | | | | X | | | | | | | | | | | | | | | | | | | | | | 2 |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | X | | | | | | | | | | | | | | | 2 |
| Urinary bladder | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | X | | X | | | | | | | | | | | | | 4 |
| Lymphoma malignant | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymphoma malignant lymphocytic | | | | | | | | | | | | | | | | | | | | | X | | | | | 3 |
| Lymphoma malignant mixed | | | | | | X | | | | | | | | | | | | | | X | | | | | | 2 |
| Lymphoma malignant undifferentiated cell type | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 200 ppm**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 0 | 0 | 6 | 1 | 4 | 4 | 5 | 7 | 7 | 7 | 8 | 9 | 0 | 1 | 1 | 3 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 |
| | 9 | 5 | 8 | 7 | 3 | 4 | 3 | 0 | 1 | 3 | 6 | 3 | 8 | 1 | 8 | 6 | 6 | 4 | 4 | 0 | 3 | 4 | 0 | 1 | 2 |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 |
| | 6 | 5 | 9 | 0 | 0 | 0 | 2 | 8 | 0 | 4 | 9 | 8 | 4 | 1 | 4 | 7 | 7 | 9 | 1 | 8 | 9 | 4 | 7 | 8 | 3 |
| | 1 | 1 | 4 | 4 | 3 | 5 | 2 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 5 | 1 | 5 | 1 | 5 | 3 | 4 |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder | A | + | + | + | A | A | A | + | + | + | + | + | A | + | + | A | + | + | + | A | A | A | + | + | + |
| Intestine large | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, cecum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + |
| Intestine large, colon | A | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, rectum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine small | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine small, duodenum | A | + | + | + | A | + | + | + | + | + | M | + | I | + | + | + | + | + | + | + | + | M | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine small, ileum | A | + | + | + | + | + | + | + | + | + | + | + | I | + | + | A | + | + | + | + | + | A | + | + | + |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Intestine small, jejunum | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | A | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, multiple | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | | | | X | | | | | | | | | | | | | | X | X | | | |
| Hepatocellular carcinoma | | | | | | | X | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular adenoma | | | | | | | | X | | X | | | | | | | | | X | | | | | | |
| Hepatocellular adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | X | | | | | | | | | | X | | X |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | + | | | + | | | + | | | | | | | | | | |
| Fat, hemangiosarcoma, metastatic, heart | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Fat, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Pancreas | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Acinus, leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leiomyosarcoma | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Squamous cell carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Squamous cell papilloma | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Squamous cell papilloma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, glandular | A | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | | X | | X | | X | | X | | | | | | X | | | X | X | X | X | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 200 ppm**
(continued)

| Number of Days on Study | 478 | 484 | 485 | 485 | 489 | 502 | 502 | 509 | 509 | 513 | 524 | 532 | 543 | 569 | 569 | 569 | 569 | 569 | 597 | 597 | 624 | 629 | 663 | 695 | 704 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carcass ID Number | 1384 | 1371 | 1285 | 1335 | 1402 | 1273 | 1333 | 1336 | 1393 | 1330 | 1335 | 1354 | 1392 | 1271 | 1312 | 1323 | 1324 | 1329 | 1303 | 1311 | 1335 | 1329 | 1332 | 1382 | 1363 | Total Tissues/ Tumors |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | 48 |
| Gallbladder | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | A | 39 |
| Intestine large | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine large, cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 47 |
| Intestine large, colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine large, rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine small | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine small, duodenum | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | A | 43 |
| Histiocytic sarcoma | | | | | | | | | | | | | | X | | | | | | | | | | | | 1 |
| Intestine small, ileum | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Intestine small, jejunum | + | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemangiosarcoma, metastatic, heart | | X | | | | | | | | | X | | X | | | | X | | | | | X | X | | | 9 |
| Hepatocellular carcinoma | | | | | | | | X | | | | | | X | X | X | | | | | | | X | X | | 7 |
| Hepatocellular carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | X | | | | 1 |
| Hepatocellular adenoma | | | | X | | | X | | | | | | | | | X | | | | X | | | X | X | | 9 |
| Hepatocellular adenoma, multiple | | | | | | | | | | | | | | | | | | | X | | X | X | | | | 3 |
| Histiocytic sarcoma | | | | X | | | | | | | | X | | X | | | | | | | | | | | | 7 |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Mesentery | | | + | + | | | | | | | | + | + | | + | | + | | | | + | | + | + | | 12 |
| Fat, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | X | | | | | | | | | | | | | 2 |
| Fat, histiocytic sarcoma | | | | X | | | | | | | | X | | | | | | | | | | | | | | 2 |
| Fat, leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Acinus, leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leiomyosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Squamous cell carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Squamous cell papilloma | | | | | | X | | | | | | | | | | | | | | | | | | | | 2 |
| Squamous cell papilloma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | X | 1 |
| Stomach, glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma | | X | X | | | | | X | | X | X | X | X | | | | X | X | | | | X | X | | X | 21 |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 200 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 0 | 0 | 6 | 1 | 4 | 4 | 5 | 7 | 7 | 7 | 8 | 9 | 0 | 1 | 1 | 3 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 |
| | 9 | 5 | 8 | 7 | 3 | 4 | 3 | 0 | 1 | 3 | 6 | 3 | 8 | 1 | 8 | 6 | 6 | 4 | 4 | 0 | 3 | 4 | 0 | 1 | 2 |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 |
| | 6 | 5 | 9 | 0 | 0 | 0 | 2 | 8 | 0 | 4 | 9 | 8 | 4 | 1 | 4 | 7 | 7 | 9 | 1 | 8 | 9 | 4 | 7 | 8 | 3 |
| | 1 | 1 | 4 | 4 | 3 | 5 | 2 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 5 | 1 | 5 | 1 | 5 | 3 | 4 |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal gland, cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | X | | | | | | | | | | | | | | X | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | X | | | | | | | | | | | | X |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland, medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Pheochromocytoma benign | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Islets, pancreatic | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid gland | M | M | + | + | + | + | + | + | + | M | + | + | + | + | + | I | + | + | M | + | + | + | M | + | M |
| Pituitary gland | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thyroid gland | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Granulosa cell tumor malignant | | | | | | | | | | | | | | | | | | | | | | | | | |
| Granulosa cell tumor benign | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Mixed tumor benign | | | | | | | | | | | | | | | | | | | | X | | | | | X |
| Bilateral, granulosa cell tumor benign | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangioma | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyp stromal | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | X | | | | | | | | | | X | | X |
| Lymph node | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Axillary, sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreatic, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Pancreatic, leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 200 ppm**
(continued)

| Number of Days on Study | 478 | 484 | 485 | 485 | 489 | 502 | 502 | 509 | 509 | 513 | 524 | 523 | 534 | 569 | 569 | 569 | 569 | 569 | 597 | 597 | 624 | 629 | 626 | 695 | 704 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Carcass ID Number** | 1384 | 1371 | 1285 | 1335 | 1340 | 1227 | 1333 | 1336 | 1339 | 1330 | 1335 | 1354 | 1332 | 1297 | 1231 | 1232 | 1239 | 1295 | 1303 | 1311 | 1315 | 1329 | 1323 | 1382 | 1336 | Total Tissues/ Tumors |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adrenal gland, cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma | | | | | | | | | | | | | | | | | | | | X | | | | | | 3 |
| Histiocytic sarcoma | | | | | | | | | | | | | | X | | | | | | | | | | | | 3 |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Sarcoma, metastatic, skin | | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |
| Adrenal gland, medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pheochromocytoma benign | | | | | | | | | | | | | X | | X | | | | | | | | | | | 2 |
| Sarcoma, metastatic, skin | | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |
| Islets, pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenoma | | | | | | | X | | | | | | | | | | | | | | | | | | X | 2 |
| Parathyroid gland | + | + | + | + | + | + | M | + | M | + | + | + | + | + | + | M | + | + | + | M | + | M | + | + | + | 38 |
| Pituitary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | 48 |
| Thyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | X | | | | | | | | | X | 2 |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| Granulosa cell tumor malignant | | | | | | | | | | | | | | | X | | | | | | | | | X | | 2 |
| Granulosa cell tumor benign | X | | | | | | | | | | | | | | | | | X | | | | | X | | X | 5 |
| Histiocytic sarcoma | | | | X | | | | | | | | X | | X | | | | | | | | | | | | 3 |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Mixed tumor benign | | | | | | | | | | | | | | X | | | | | | X | | | | | X | 5 |
| Bilateral, granulosa cell tumor benign | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| Hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| Polyp stromal | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Axillary, sarcoma, metastatic, skin | | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |
| Pancreatic, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pancreatic, leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 200 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 0 | 0 | 6 | 1 | 4 | 4 | 5 | 7 | 7 | 7 | 8 | 9 | 0 | 1 | 1 | 3 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 |
| | 9 | 5 | 8 | 7 | 3 | 4 | 3 | 0 | 1 | 3 | 6 | 3 | 8 | 1 | 8 | 6 | 6 | 4 | 4 | 0 | 3 | 4 | 0 | 1 | 2 |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 |
| | 6 | 5 | 9 | 0 | 0 | 0 | 2 | 8 | 0 | 4 | 9 | 8 | 4 | 1 | 4 | 7 | 7 | 9 | 1 | 8 | 9 | 4 | 7 | 8 | 3 |
| | 1 | 1 | 4 | 4 | 3 | 5 | 2 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 5 | 1 | 5 | 1 | 5 | 3 | 4 |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, bronchial | M | + | + | + | + | + | + | M | + | + | M | M | + | + | + | M | + | + | M | M | M | M | M | M | I |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Lymph node, mandibular | M | + | M | + | M | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Lymph node, mediastinal | M | + | + | + | M | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Lymph node, mesenteric | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | M | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | X | | | | | | | | | | | | X |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | X | | | | | | | | | | X | | X |
| Thymus | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | M | + | + | + | M | M | + |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | A | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | M |
| Adenoacanthoma | | | X | | | | | | | | | | | | | | X | X | | | | | | | |
| Adenocarcinoma | | | | | | | | X | | | | | | | X | | | | | X | | | | X | |
| Adenocarcinoma, multiple | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Sebaceous gland, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Subcutaneous tissue, hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal muscle | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diaphragm, sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | X | | | | | | | | | | X | | |
| Spinal cord | | | | | | | | | | | | | | + | | | | | | | | | | | |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | X | | | | | | | | | X | | | | | | | X | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 200 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 478 | 484 | 485 | 485 | 489 | 502 | 502 | 509 | 509 | 513 | 524 | 532 | 543 | 569 | 569 | 569 | 569 | 569 | 597 | 597 | 624 | 629 | 663 | 695 | 704 | |
| **Carcass ID Number** | 1384 | 1371 | 1285 | 1335 | 1402 | 1723 | 1333 | 1364 | 1393 | 1331 | 1335 | 1354 | 1392 | 1327 | 1312 | 1323 | 1324 | 1339 | 1303 | 1311 | 1315 | 1329 | 1323 | 1382 | 1336 | **Total Tissues/ Tumors** |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, bronchial | + | + | + | + | + | + | + | M | + | + | M | + | M | + | + | + | + | + | + | + | + | + | M | + | + | 34 |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | X | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | X | | | | | | | | X | | | | | | | | | | | | | | 3 |
| Lymph node, mandibular | M | + | + | + | + | + | + | + | I | + | + | + | M | M | + | + | + | + | + | + | + | + | M | + | + | 39 |
| Histiocytic sarcoma | | | | | | | | | | | | X | | | | | | | | | | | | | | 2 |
| Lymph node, mediastinal | + | + | + | + | + | I | M | M | + | + | + | + | + | + | M | + | + | + | + | + | M | + | M | M | + | 40 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | X | | | | | | | | X | | | | | | | | | | | | | | | | | 2 |
| Histiocytic sarcoma | | | | X | | | | | | | | | | X | | | | | | | | | | | | 3 |
| Lymph node, mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Histiocytic sarcoma | | | | X | | | | | | | | X | | X | | | | | | | | | | | | 6 |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | | | | | | | | | X | | | | | | | | | | | | | | 4 |
| Thymus | M | + | + | M | I | + | + | + | + | + | M | + | + | I | + | + | + | + | + | + | + | M | + | + | + | 40 |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Adenoacanthoma | | | | | | | | | | X | | | | | | | | | | | | | | | | 4 |
| Adenocarcinoma | | | X | | X | X | X | X | | | | | | X | | | | | | | | | | | | 10 |
| Adenocarcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Sebaceous gland, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Subcutaneous tissue, hemangiosarcoma | | | | | | | | | | | | | | | | X | | | X | | | | | | | 2 |
| Subcutaneous tissue, sarcoma | | | | | | | | | | | X | | | | X | | | | | | | | X | | | 3 |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal muscle | | | | | | | | | | | | | | | + | | | | | | | | | | | 1 |
| Diaphragm, sarcoma, metastatic, skin | | | | | | | | | | | | | | | X | | | | | | | | | | | 1 |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | X | | | | | | | | | | | | | 2 |
| Histiocytic sarcoma | | | | | | | | | | | | X | | | | | | | | | | | | | | 4 |
| Spinal cord | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 49 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, multiple | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 200 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 0 | 0 | 6 | 1 | 4 | 4 | 5 | 7 | 7 | 7 | 8 | 9 | 0 | 1 | 1 | 3 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 |
| | 9 | 5 | 8 | 7 | 3 | 4 | 3 | 0 | 1 | 3 | 6 | 3 | 8 | 1 | 8 | 6 | 6 | 4 | 4 | 0 | 3 | 4 | 0 | 1 | 2 |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 |
| | 6 | 5 | 9 | 0 | 0 | 0 | 2 | 8 | 0 | 4 | 9 | 8 | 4 | 1 | 4 | 7 | 7 | 9 | 1 | 8 | 9 | 4 | 7 | 8 | 3 |
| | 1 | 1 | 4 | 4 | 3 | 5 | 2 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 5 | 1 | 5 | 1 | 5 | 3 | 4 |
| **Respiratory System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lung (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar adenoma | | | | | | | | | | | | | X | | X | | | | X | | | | | | |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Alveolar/bronchiolar carcinoma | | | | | | | | | | | X | | | | | | | | X | | | | | | |
| Alveolar/bronchiolar carcinoma, multiple | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Granulosa cell tumor malignant, metastatic, ovary | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | X | | | | | | | | | | | | X | | | | |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | X | | | | | | | | | | X | | X |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, hemangiosarcoma, metastatic, heart | | | | | | | X | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ear | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian gland | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adenoma | | | | | | | | X | | X | | | | X | X | | | | X | X | | | | X | |
| Bilateral, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | X | | X |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Renal tubule, adenoma | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Urinary bladder | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | X | | | | | | | | | | X | | X |
| Leukemia granulocytic | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Lymphoma malignant lymphocytic | | X | | X | | | | X | | | X | | | X | | | | | | | | | | | |
| Lymphoma malignant mixed | | | | | | | | | | | | | | | | | | | X | | | | | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 200 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 478 | 484 | 485 | 485 | 489 | 502 | 502 | 509 | 509 | 513 | 524 | 532 | 543 | 569 | 569 | 569 | 569 | 569 | 597 | 597 | 624 | 629 | 663 | 695 | 704 | |
| **Carcass ID Number** | 1384 | 1371 | 1285 | 1335 | 1402 | 1273 | 1333 | 1364 | 1393 | 1331 | 1353 | 1354 | 1392 | 1271 | 1312 | 1323 | 1324 | 1345 | 1330 | 1311 | 1355 | 1229 | 1233 | 1382 | 1363 | **Total Tissues/ Tumors** |
| **Respiratory System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lung (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar adenoma | | X | | X | X | | X | X | | | | X | | | | | | X | | | | | | | | 10 |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | | | | | | | | | | | X | | X | | | X | 4 |
| Alveolar/bronchiolar carcinoma | | | | X | | | | X | | | X | X | | | X | | | | | X | | | | | | 8 |
| Alveolar/bronchiolar carcinoma, multiple | X | | | | | | X | | X | | | | | | | | X | X | X | | X | | X | | X | 10 |
| Granulosa cell tumor malignant, metastatic, ovary | | | | | | | | | | | | | | | X | | | | | | | | | | | 1 |
| Hemangiosarcoma, metastatic, heart | | X | | | | | | | | | | | | | | | | | | | | X | X | | | 5 |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | X | | | | | | | | X | X | | | 3 |
| Histiocytic sarcoma | | | | X | | | | | | | | X | | X | | | | | | | | | | | | 7 |
| Sarcoma, metastatic, skin | | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |
| Mediastinum, alveolar/bronchiolar carcinoma, metastatic, lung | X | | | | | | | | X | | | | | | | | | | | | | | | | | 2 |
| Mediastinum, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | X | 2 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ear | | | | | | | | | | | | | | | | | | | | | + | | | + | | 2 |
| Eye | | | + | | | | | | | | | | | | | | | + | | | + | | | | | 3 |
| Harderian gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| Adenoma | X | X | X | | X | | | | X | | X | | | | | X | | X | | X | | X | | X | | 18 |
| Bilateral, adenoma | | | | | | | | | | | | | | | | | | | X | | X | | | | | 2 |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | X | | | | | | | | X | | X | | | | | | | | | | | | 5 |
| Leiomyosarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Renal tubule, adenoma | | | | | | | | | | | | | | | | | | | | | | | X | | | 2 |
| Urinary bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Histiocytic sarcoma | | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | | | | X | | | | | | | | X | | X | | | | | | | | | | | | 7 |
| Leukemia granulocytic | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymphoma malignant lymphocytic | | | | | | | | | | X | X | | | | | | | | | | X | | | | | 8 |
| Lymphoma malignant mixed | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0181 | 1899 | 2003 | 2005 | 2201 | 2202 | 2300 | 2300 | 2302 | 2400 | 2406 | 2503 | 2507 | 2507 | 2509 | 2702 | 2705 | 2705 | 2808 | 2800 | 2800 | 2803 | 2805 | 2805 | 2805 |
| **Carcass ID Number** | 1704 | 1642 | 1643 | 1642 | 1703 | 1672 | 1664 | 1752 | 1763 | 1592 | 1751 | 1772 | 1675 | 1744 | 1641 | 1702 | 1595 | 1685 | 1664 | 1713 | 1764 | 1684 | 1665 | 1683 | 1701 |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder | + | A | + | M | + | + | A | + | A | + | + | + | + | + | + | + | A | + | A | + | + | + | + | A | + |
| Intestine large | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Intestine large, cecum | + | A | + | + | + | + | A | + | A | + | + | + | + | + | + | + | A | + | A | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine large, colon | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | A | + | + | + | + | + | + |
| Intestine large, rectum | + | M | + | + | + | + | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Intestine small | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Intestine small, duodenum | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + |
| Intestine small, ileum | + | A | + | + | + | + | A | + | A | + | + | + | + | + | + | + | A | + | A | + | + | + | + | + | + |
| Intestine small, jejunum | + | A | + | + | + | + | A | + | + | + | + | A | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, hemangiosarcoma, metastatic, spleen | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, sarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary glands | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, forestomach | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Squamous cell papilloma | | | | | | | | | | | X | | | | | | | | | | | | | | X |
| Squamous cell papilloma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, glandular | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 289 | 294 | 296 | 299 | 300 | 300 | 307 | 307 | 311 | 315 | 316 | 316 | 317 | 317 | 319 | 319 | 325 | 328 | 329 | 329 | 330 | 331 | 335 | 335 | 341 |
| **Carcass ID Number** | 165 1 | 159 4 | 173 3 | 165 3 | 167 3 | 171 4 | 159 3 | 162 1 | 165 5 | 175 4 | 177 2 | 174 5 | 160 1 | 160 5 | 161 1 | 162 4 | 164 4 | 160 4 | 161 5 | 167 4 | 169 4 | 161 3 | 164 3 | 166 1 | 169 3 |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder | I | A | A | + | + | + | + | + | I | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | M |
| Intestine large | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, cecum | A | A | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Intestine large, colon | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, rectum | + | + | A | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine small | A | A | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A |
| Intestine small, duodenum | A | A | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A |
| Intestine small, ileum | A | A | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A |
| Intestine small, jejunum | A | A | A | + | + | + | + | + | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | A |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, multiple | | | | | | | | | | | | | | | | | X | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | X | | | | X | | X | | | | X | | | | | | |
| Hemangiosarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | X | | X | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, hemangiosarcoma, metastatic, spleen | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, sarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell papilloma | | | | | | | | | X | | | | | | | | | | X | | | | | | |
| Squamous cell papilloma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, glandular | + | + | A | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 350 | 353 | 356 | 357 | 364 | 366 | 367 | 369 | 371 | 373 | 376 | 376 | 379 | 384 | 385 | 385 | 387 | 387 | 392 | 397 | 398 | 401 | 418 | 418 | 418 |
| **Carcass ID Number** | 1671 | 1591 | 1724 | 1743 | 1765 | 1668 | 1674 | 1652 | 1663 | 1673 | 1681 | 1675 | 1663 | 1662 | 1663 | 1675 | 1662 | 1692 | 1712 | 1665 | 1603 | 1691 | 1732 | 1751 | 1762 |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M |
| Gallbladder | A | A | A | + | + | A | A | A | + | A | A | + | + | + | + | + | + | + | A | + | + | + | A | + | + |
| Intestine large | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, cecum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine large, colon | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, rectum | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Intestine small | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Intestine small, duodenum | + | A | A | + | + | A | A | + | + | A | + | + | + | + | + | + | + | + | M | + | + | + | A | + | + |
| Intestine small, ileum | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Intestine small, jejunum | A | A | + | + | + | A | A | M | + | A | + | + | + | A | + | + | + | + | A | + | + | + | A | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | X | X | | X | | | X | X | X | X | X | X | | | | | | | X | | X | | | X | |
| Hemangiosarcoma, metastatic, skin | | | X | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Hepatocellular adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | X |
| Mesentery | | | | | | | | | | | | | | | + | | | + | | | + | | + | | + |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Fat, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Fat, hemangiosarcoma, metastatic, spleen | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Fat, sarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Acinus, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | X |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Squamous cell carcinoma | | | | | | | | | | | | X | | | | | | | | | X | | | | X |
| Squamous cell papilloma | X | | X | | X | | X | | | X | X | | | | | | X | | X | X | | | | X | |
| Squamous cell papilloma, multiple | | | | | | | | | | | | | | | | | | | | | | X | | | |
| Stomach, glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | X |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Number of Days on Study** | 4 | 4 | 4 | 4 | 4 | |
| | 2 | 2 | 4 | 4 | 5 | |
| | 5 | 5 | 1 | 3 | 0 | |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | |
| | 7 | 7 | 6 | 6 | 6 | Total |
| | 2 | 3 | 5 | 2 | 7 | Tissues/ |
| | 3 | 1 | 4 | 5 | 4 | Tumors |
| **Alimentary System** | | | | | | |
| Esophagus | + | + | + | + | + | 79 |
| Gallbladder | A | + | + | + | A | 55 |
| Intestine large | + | + | + | + | + | 77 |
| Intestine large, cecum | A | + | + | + | + | 68 |
| Histiocytic sarcoma | | | | | | 1 |
| Intestine large, colon | A | + | + | + | + | 73 |
| Intestine large, rectum | + | + | + | + | + | 73 |
| Intestine small | + | + | + | + | + | 70 |
| Intestine small, duodenum | A | + | + | + | M | 62 |
| Intestine small, ileum | A | + | + | + | + | 66 |
| Intestine small, jejunum | + | + | + | + | A | 60 |
| Liver | + | + | + | + | + | 80 |
| Hemangiosarcoma, multiple | | | | | | 1 |
| Hemangiosarcoma, metastatic, heart | | | | X | X | 18 |
| Hemangiosarcoma, metastatic, skin | | | | | | 1 |
| Hepatocellular carcinoma | | | | | | 1 |
| Hepatocellular adenoma | | | | | X | 1 |
| Histiocytic sarcoma | | | | | | 4 |
| Sarcoma, metastatic, mammary gland | | | | | | 1 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | 2 |
| Mesentery | | | | + | | 6 |
| Sarcoma, metastatic, mammary gland | | | | | | 1 |
| Fat, hemangiosarcoma, metastatic, heart | | | | | | 1 |
| Fat, hemangiosarcoma, metastatic, spleen | | | | | | 1 |
| Fat, sarcoma, metastatic, stomach | | | | X | | 1 |
| Fat, squamous cell carcinoma, metastatic, stomach | | | | | | 1 |
| Pancreas | + | + | + | + | + | 78 |
| Sarcoma, metastatic, mammary gland | | | | | | 1 |
| Acinus, squamous cell carcinoma, metastatic, stomach | | | | | | 2 |
| Salivary glands | + | + | + | + | + | 79 |
| Stomach | + | + | + | + | + | 79 |
| Stomach, forestomach | + | + | + | + | + | 79 |
| Sarcoma | | | | X | | 1 |
| Sarcoma, metastatic, mammary gland | | | | | | 1 |
| Squamous cell papilloma | | | | | X | 15 |
| Squamous cell papilloma, multiple | | | | | | 1 |
| Stomach, glandular | + | + | + | + | + | 76 |
| Histiocytic sarcoma | | | | | | 1 |
| Sarcoma, metastatic, mammary gland | | | | | | 1 |
| Squamous cell carcinoma, metastatic, stomach | | | | X | | 3 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 8 | 0 | 0 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | 1 | 9 | 3 | 5 | 1 | 2 | 0 | 0 | 2 | 0 | 6 | 3 | 7 | 7 | 9 | 2 | 5 | 5 | 0 | 0 | 0 | 3 | 5 | 5 | 5 |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 6 | 7 | 5 | 6 | 6 | 7 | 7 | 6 | 6 | 6 | 7 |
| | 0 | 4 | 3 | 3 | 0 | 7 | 6 | 5 | 6 | 9 | 1 | 2 | 7 | 4 | 4 | 0 | 9 | 8 | 1 | 1 | 6 | 8 | 3 | 8 | 0 |
| | 4 | 2 | 4 | 2 | 3 | 2 | 4 | 2 | 3 | 2 | 5 | 5 | 5 | 4 | 1 | 2 | 5 | 5 | 4 | 3 | 4 | 4 | 5 | 3 | 1 |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood vessel | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal gland, cortex | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland, medulla | + | A | + | + | + | + | A | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, pancreatic | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | + | + | + | + | + | + | + |
| Pituitary gland | + | + | M | + | + | + | I | + | + | + | + | + | + | + | I | I | M | + | + | + | + | + | + | + | + |
| Thyroid gland | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Granulosa cell tumor benign | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed tumor benign | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyp stromal | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood | | | | | | | | | | | | | | | | M | | | | | | | | | |
| Bone marrow | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, bronchial | + | + | + | M | + | + | + | M | + | + | + | + | + | M | + | + | + | + | M | M | + | + | + | + | M |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mandibular | + | + | + | I | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 289 | 294 | 296 | 298 | 300 | 300 | 307 | 307 | 311 | 315 | 316 | 316 | 317 | 317 | 319 | 319 | 325 | 328 | 329 | 329 | 330 | 331 | 335 | 335 | 341 |
| **Carcass ID Number** | 165 | 159 | 173 | 165 | 167 | 171 | 159 | 162 | 165 | 175 | 174 | 174 | 160 | 160 | 161 | 162 | 164 | 160 | 161 | 173 | 169 | 161 | 164 | 161 | 169 |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood vessel | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | | | | | X | X | | | | X | | X | | | | X | X | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal gland, cortex | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | X | | | | | | | | | |
| Sarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland, medulla | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, pancreatic | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | + | + | + | + | + | + |
| Pituitary gland | + | + | A | + | + | + | + | + | + | I | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + |
| Thyroid gland | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Granulosa cell tumor benign | | | | | | | | | X | X | | | | | | | | | | | X | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Mixed tumor benign | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Uterus | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Polyp stromal | | | | | | | | | | | | | | | | X | | | | | | | | | |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | X | | X | | | | | | | | | |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Lymph node, bronchial | + | + | + | + | + | + | + | + | M | + | + | + | M | M | + | M | + | + | + | + | + | + | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Lymph node, mandibular | + | + | A | + | + | + | + | I | M | + | M | + | M | + | + | I | + | + | + | + | + | M | + | I | + |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 350 | 353 | 356 | 357 | 364 | 366 | 367 | 369 | 371 | 373 | 376 | 376 | 379 | 384 | 385 | 385 | 387 | 387 | 392 | 397 | 399 | 401 | 411 | 411 | 418 |
| **Carcass ID Number** | 1671 | 1591 | 1724 | 1743 | 1746 | 1768 | 1741 | 1645 | 1663 | 1735 | 1681 | 1675 | 1653 | 1662 | 1633 | 1675 | 1623 | 1629 | 1712 | 1665 | 1603 | 1691 | 1732 | 1751 | 1762 |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood vessel | | + | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | X | X | | X | | | X | X | X | X | X | X | | X | | | X | | X | | X | | | X | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | X | | | | | | | | | | |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal gland, cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland, medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid gland | + | + | M | M | + | + | + | + | + | + | M | + | + | + | + | + | + | M | + | + | M | + | M | + | + |
| Pituitary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + |
| Thyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Follicular cell, adenoma | | X | | | | | | | | | | | | | | | | | | | | | | | |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Granulosa cell tumor benign | | | | | | | | | | | | | | | X | | X | | | | X | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed tumor benign | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyp stromal | | | | | | | | | | | | | | | | | | | | | | | | X | |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, bronchial | + | + | + | M | + | M | M | M | + | M | M | M | M | + | M | + | M | + | + | + | M | M | + | M | M |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mandibular | + | + | + | I | + | + | + | M | + | M | + | I | + | M | + | M | + | M | M | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | X | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Number of Days on Study** | 4 2 5 | 4 2 5 | 4 4 1 | 4 4 3 | 4 5 0 | |
| **Carcass ID Number** | 1 7 2 3 | 1 7 3 1 | 1 6 5 4 | 1 6 2 5 | 1 6 7 4 | Total Tissues/ Tumors |
| **Cardiovascular System** | | | | | | |
| Blood vessel | | | | | | 1 |
| Heart | + | + | + | + | + | 80 |
| Hemangiosarcoma | X | | | X | X | 23 |
| Histiocytic sarcoma | | | | | | 1 |
| Sarcoma, metastatic, mammary gland | | | | | | 1 |
| **Endocrine System** | | | | | | |
| Adrenal gland | + | + | + | + | + | 78 |
| Adrenal gland, cortex | + | + | + | + | + | 78 |
| Histiocytic sarcoma | | | | | | 2 |
| Sarcoma, metastatic, stomach | | | | X | | 1 |
| Adrenal gland, medulla | + | + | + | + | + | 76 |
| Islets, pancreatic | + | + | + | + | + | 78 |
| Parathyroid gland | + | + | + | M | + | 69 |
| Pituitary gland | + | + | + | + | + | 71 |
| Thyroid gland | + | + | + | + | + | 78 |
| Follicular cell, adenoma | | | | | | 1 |
| **General Body System** | | | | | | |
| None | | | | | | |
| **Genital System** | | | | | | |
| Ovary | + | + | + | + | + | 79 |
| Adenoma | | | | | | 1 |
| Granulosa cell tumor benign | | | | | | 6 |
| Histiocytic sarcoma | | | | | | 1 |
| Mixed tumor benign | | | | | | 1 |
| Uterus | + | + | + | + | + | 78 |
| Histiocytic sarcoma | | | | | | 1 |
| Polyp stromal | | | | | | 2 |
| **Hematopoietic System** | | | | | | |
| Blood | | | | | | |
| Bone marrow | + | + | + | + | + | 79 |
| Histiocytic sarcoma | | | | | | 2 |
| Lymph node | + | + | + | + | + | 79 |
| Histiocytic sarcoma | | | | | | 1 |
| Lymph node, bronchial | M | + | + | M | + | 54 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | 1 |
| Histiocytic sarcoma | | | | | | 1 |
| Lymph node, mandibular | M | M | M | + | + | 58 |
| Adenocarcinoma, metastatic, mammary gland | | | | | | 1 |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0181 | 1899 | 2003 | 2005 | 2021 | 2022 | 2230 | 2330 | 2332 | 2340 | 2446 | 2553 | 2557 | 2557 | 2559 | 2572 | 2775 | 2775 | 2880 | 2880 | 2880 | 2883 | 2885 | 2885 | 2885 |
| **Carcass ID Number** | 1704 | 1642 | 1643 | 1663 | 1703 | 1672 | 1664 | 1675 | 1763 | 1759 | 1771 | 1772 | 1767 | 1774 | 1741 | 1670 | 1759 | 1685 | 1661 | 1671 | 1764 | 1684 | 1645 | 1683 | 1701 |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mediastinal | + | + | + | M | + | M | + | M | + | + | + | + | + | + | + | M | + | + | M | + | + | + | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mesenteric | + | A | + | M | + | + | + | M | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | X | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed tumor malignant | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skin | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Keratoacanthoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, sarcoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal muscle | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diaphragm, sarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spinal cord | | | + | | | + | | | | | + | | | | + | | | | | | | | + | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 289 | 294 | 296 | 299 | 300 | 300 | 307 | 307 | 311 | 315 | 316 | 316 | 317 | 317 | 319 | 319 | 325 | 328 | 329 | 329 | 330 | 331 | 335 | 335 | 341 |
| **Carcass ID Number** | 1165 | 1159 | 1173 | 1165 | 1167 | 1171 | 1159 | 1162 | 1165 | 1175 | 1174 | 1174 | 1160 | 1160 | 1161 | 1162 | 1164 | 1160 | 1161 | 1173 | 1169 | 1161 | 1164 | 1166 | 1169 |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mediastinal | M | + | + | + | + | M | + | + | + | + | + | + | + | + | + | M | + | M | + | + | + | + | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mesenteric | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | | X | | X | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | X | | X | | | | | | | | | |
| Thymus | + | + | A | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | M | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | X | | | | | | | | | |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | X | | | | X | | | X |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Mixed tumor malignant | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Keratoacanthoma | | | | | | | | X | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, hemangiosarcoma | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Subcutaneous tissue, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, sarcoma, multiple | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Subcutaneous tissue, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal muscle | | | + | | | | | | | | | | | | | | | | | | | | | | |
| Diaphragm, sarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spinal cord | | | | | | | | | | + | | | + | | | | | | | + | + | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 350 | 353 | 356 | 357 | 364 | 366 | 367 | 369 | 371 | 373 | 376 | 376 | 379 | 384 | 385 | 385 | 387 | 387 | 392 | 397 | 398 | 401 | 418 | 418 | 418 |
| **Carcass ID Number** | 1671 | 1591 | 1724 | 1743 | 1765 | 1682 | 1674 | 1645 | 1663 | 1735 | 1681 | 1673 | 1663 | 1662 | 1663 | 1755 | 1623 | 1692 | 1712 | 1676 | 1660 | 1691 | 1732 | 1751 | 1762 |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mediastinal | M | + | + | + | + | + | M | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | M | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | X | | | X | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, mammary gland | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | X |
| Lymph node, mesenteric | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | + | + | + | M | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Thymus | + | + | + | M | + | + | + | M | M | + | + | + | M | + | + | + | + | + | + | + | I | + | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M |
| Adenocarcinoma | | X | | | X | | | | | | | | | | | X | X | | | X | | | | X | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed tumor malignant | | | | X | | | | | | | | | X | | | | | | | | | | | | |
| Sarcoma | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Keratoacanthoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, hemangiosarcoma | | | X | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, hemangiosarcoma, metastatic, heart | | | | | | | | | | X | | | | | | | | | | | X | | | | |
| Subcutaneous tissue, sarcoma | | | | | | | | | | | | | | | | | X | | | | | X | | | |
| Subcutaneous tissue, sarcoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal muscle | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diaphragm, sarcoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | X | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Spinal cord | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Number of Days on Study** | 4 | 4 | 4 | 4 | 4 | |
| | 2 | 2 | 4 | 4 | 5 | |
| | 5 | 5 | 1 | 3 | 0 | |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | Total |
| | 7 | 7 | 6 | 6 | 6 | Tissues/ |
| | 2 | 3 | 5 | 2 | 7 | Tumors |
| | 3 | 1 | 4 | 5 | 4 | |
| **Hematopoietic System** (continued) | | | | | | |
| Lymph node, mediastinal | + | + | + | + | + | 67 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | 2 |
| Histiocytic sarcoma | | | | | | 1 |
| Sarcoma, metastatic, mammary gland | | | | | | 1 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | 2 |
| Lymph node, mesenteric | + | + | + | + | + | 71 |
| Histiocytic sarcoma | | | | | | 4 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | 1 |
| Spleen | + | + | + | + | + | 78 |
| Hemangiosarcoma | | | | | | 1 |
| Histiocytic sarcoma | | | | | | 4 |
| Thymus | + | + | + | + | + | 71 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | 1 |
| Histiocytic sarcoma | | | | | | 3 |
| **Integumentary System** | | | | | | |
| Mammary gland | + | + | + | + | + | 77 |
| Adenocarcinoma | | | X | | X | 12 |
| Histiocytic sarcoma | | | | | | 1 |
| Mixed tumor malignant | | X | | | | 4 |
| Sarcoma | | | | | | 1 |
| Skin | + | + | + | + | + | 79 |
| Keratoacanthoma | | | | | | 1 |
| Subcutaneous tissue, hemangiosarcoma | | | | | | 2 |
| Subcutaneous tissue, hemangiosarcoma, metastatic, heart | | | | | | 2 |
| Subcutaneous tissue, sarcoma | | | | | | 2 |
| Subcutaneous tissue, sarcoma, multiple | | | | | | 1 |
| Subcutaneous tissue, squamous cell carcinoma, metastatic, stomach | | | | | | 1 |
| **Musculoskeletal System** | | | | | | |
| Bone | + | + | + | + | + | 80 |
| Skeletal muscle | | | | + | | 2 |
| Diaphragm, sarcoma, metastatic, stomach | | | | X | | 1 |
| **Nervous System** | | | | | | |
| Brain | + | + | + | + | + | 80 |
| Hemangiosarcoma, metastatic, heart | | | | | | 1 |
| Histiocytic sarcoma | | | | | | 1 |
| Spinal cord | | | | | | 9 |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 8 | 0 | 0 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | 1 | 9 | 3 | 5 | 1 | 2 | 0 | 0 | 2 | 0 | 6 | 3 | 7 | 7 | 9 | 2 | 5 | 5 | 0 | 0 | 0 | 3 | 5 | 5 | 5 |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 6 | 7 | 5 | 6 | 6 | 7 | 7 | 6 | 6 | 6 | 7 |
| | 0 | 4 | 3 | 3 | 0 | 7 | 6 | 5 | 6 | 9 | 1 | 2 | 7 | 4 | 4 | 0 | 9 | 8 | 1 | 1 | 6 | 8 | 3 | 8 | 0 |
| | 4 | 2 | 4 | 2 | 3 | 2 | 4 | 2 | 3 | 2 | 5 | 5 | 5 | 4 | 1 | 2 | 5 | 5 | 4 | 3 | 4 | 4 | 5 | 3 | 1 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | A | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar adenoma | | | | | | | | | | | | | | | | | X | | | X | | | | | X |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed tumor malignant, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, mixed tumor malignant, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Trachea | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | | | | | | + | | | + | | | | |
| Harderian gland | + | I | M | M | M | M | M | M | M | M | M | + | M | M | I | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zymbal's gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 289 | 294 | 296 | 299 | 300 | 300 | 307 | 307 | 311 | 315 | 316 | 316 | 317 | 317 | 319 | 319 | 325 | 328 | 329 | 329 | 330 | 331 | 335 | 335 | 341 |
| **Carcass ID Number** | 165 1 | 159 4 | 173 3 | 165 3 | 167 3 | 171 4 | 159 3 | 162 1 | 165 5 | 175 4 | 174 2 | 174 5 | 160 1 | 160 5 | 161 1 | 162 4 | 164 4 | 160 4 | 161 5 | 167 4 | 169 4 | 161 3 | 164 3 | 166 1 | 169 3 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | A | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I |
| Lung | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Alveolar/bronchiolar adenoma | | | | | | | | | X | | | | | | X | | | X | | | | X | | | |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma | | | | | | | | X | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | X | | | | X | | | | | | |
| Hemangiosarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | X | | X | | | | | | | | | |
| Mixed tumor malignant, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Sarcoma, metastatic, skin | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, mixed tumor malignant, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, sarcoma, metastatic, skin | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Mediastinum, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Trachea | A | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | + | | | | | | | | | | | | | | | | | | | |
| Harderian gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | X | | | | X | | | | | X | | | | X | | | | |
| Zymbal's gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 350 | 353 | 356 | 357 | 364 | 366 | 367 | 369 | 371 | 373 | 376 | 377 | 379 | 384 | 385 | 388 | 387 | 387 | 392 | 397 | 398 | 401 | 418 | 418 | 418 |
| **Carcass ID Number** | 1671 | 1591 | 1724 | 1743 | 1765 | 1682 | 1741 | 1652 | 1663 | 1735 | 1681 | 1753 | 1631 | 1662 | 1633 | 1755 | 1623 | 1692 | 1712 | 1765 | 1603 | 1691 | 1732 | 1751 | 1762 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | A | + | + | I | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, mammary gland | | | | | | | | | | | | | | | | | | | | X | | | | X | |
| Alveolar/bronchiolar adenoma | | | | | | | | X | X | | X | | | | | | X | | | | X | | | | |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | | | | | | X | | | | | X | | | X | | |
| Alveolar/bronchiolar carcinoma | | | | | | | | | | | | | X | | X | | | X | | | | | | | |
| Alveolar/bronchiolar carcinoma, multiple | | | | | | | | | | | | | | | | X | X | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | X | X | | | | | X | X | X | X | X | | | | | | | | X | | X | | | | |
| Hemangiosarcoma, metastatic, skin | | | X | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Mixed tumor malignant, metastatic, mammary gland | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Mediastinum, alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | X | | | X | | | | | | | |
| Mediastinum, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, mixed tumor malignant, metastatic, mammary gland | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Mediastinum, sarcoma, metastatic, skin | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinum, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Trachea | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian gland | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | X | | | | | | | | | | | | | | | X | | | X | | | X | X |
| Zymbal's gland | | | | | | | | | | | | | | | | | | + | | | | | | | |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carcinoma | | | | | | | | | | | | | | | | | | X | | | | | | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Number of Days on Study** | 4 2 5 | 4 2 5 | 4 4 1 | 4 4 3 | 4 5 0 | |
| **Carcass ID Number** | 1 7 2 3 | 1 7 3 1 | 1 6 5 4 | 1 6 2 5 | 1 6 7 4 | Total Tissues/ Tumors |
| **Respiratory System** | | | | | | |
| Larynx | + | + | + | + | + | 72 |
| Lung | + | + | + | + | + | 78 |
| Adenocarcinoma, metastatic, mammary gland | | | X | | | 4 |
| Alveolar/bronchiolar adenoma | | | | X | X | 14 |
| Alveolar/bronchiolar adenoma, multiple | | | | | | 3 |
| Alveolar/bronchiolar carcinoma | | | | | X | 5 |
| Alveolar/bronchiolar carcinoma, multiple | | X | | | | 3 |
| Hemangiosarcoma, metastatic, heart | X | | | X | X | 14 |
| Hemangiosarcoma, metastatic, skin | | | | | | 1 |
| Hepatocellular carcinoma, metastatic, liver | | | | | | 1 |
| Histiocytic sarcoma | | | | | | 4 |
| Mixed tumor malignant, metastatic, mammary gland | | X | | | | 3 |
| Sarcoma, metastatic, skin | | | | | | 1 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | 1 |
| Mediastinum, alveolar/bronchiolar carcinoma, metastatic, lung | | X | | | | 3 |
| Mediastinum, hemangiosarcoma, metastatic, heart | X | | | | | 1 |
| Mediastinum, mixed tumor malignant, metastatic, mammary gland | | | | | | 1 |
| Mediastinum, sarcoma, metastatic, skin | | | | | | 1 |
| Mediastinum, squamous cell carcinoma, metastatic, stomach | | | | | | 1 |
| Nose | + | + | + | + | + | 79 |
| Trachea | + | + | + | + | + | 73 |
| **Special Senses System** | | | | | | |
| Eye | | | | | | 3 |
| Harderian gland | + | + | + | + | + | 66 |
| Adenoma | | | | | | 9 |
| Zymbal's gland | | | | | + | 2 |
| Adenoma | | | | | X | 1 |
| Carcinoma | | | | | | 1 |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 8 | 0 | 0 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | 1 | 9 | 3 | 5 | 1 | 2 | 0 | 0 | 2 | 0 | 6 | 3 | 7 | 7 | 9 | 2 | 5 | 5 | 0 | 0 | 0 | 3 | 5 | 5 | 5 |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 6 | 7 | 5 | 6 | 6 | 7 | 7 | 6 | 6 | 6 | 7 |
| | 0 | 4 | 3 | 3 | 0 | 7 | 6 | 5 | 6 | 9 | 1 | 2 | 7 | 4 | 4 | 0 | 9 | 8 | 1 | 1 | 6 | 8 | 3 | 8 | 0 |
| | 4 | 2 | 4 | 2 | 3 | 2 | 4 | 2 | 3 | 2 | 5 | 5 | 5 | 4 | 1 | 2 | 5 | 5 | 4 | 3 | 4 | 4 | 5 | 3 | 1 |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary bladder | + | A | + | + | + | + | A | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphoma malignant | | X | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphoma malignant lymphocytic | | | X | | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | X | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 289 | 294 | 296 | 298 | 300 | 300 | 307 | 307 | 311 | 315 | 316 | 316 | 317 | 317 | 319 | 319 | 325 | 328 | 329 | 329 | 330 | 331 | 335 | 335 | 341 |
| **Carcass ID Number** | 165 | 159 | 157 | 156 | 167 | 171 | 159 | 162 | 165 | 157 | 174 | 174 | 160 | 160 | 161 | 162 | 164 | 160 | 161 | 173 | 169 | 161 | 164 | 169 | 169 |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | X | | X | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary bladder | + | M | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | | X | | X | | | | | | | | | |
| Lymphoma malignant | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphoma malignant lymphocytic | | X | | X | X | | X | | | X | | X | X | | | | | | X | X | X | | | | |

**TABLE B2**
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 350 | 353 | 356 | 357 | 364 | 366 | 367 | 369 | 371 | 373 | 376 | 377 | 379 | 384 | 385 | 385 | 387 | 387 | 392 | 397 | 398 | 401 | 418 | 418 | 418 |
| **Carcass ID Number** | 167 1 | 159 1 | 172 4 | 174 3 | 176 5 | 168 2 | 174 1 | 165 2 | 166 3 | 173 5 | 168 1 | 175 3 | 163 1 | 166 2 | 163 3 | 175 5 | 162 3 | 169 2 | 171 2 | 166 5 | 160 3 | 169 1 | 173 2 | 175 1 | 176 2 |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Urinary bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | | | | | | | | |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Lymphoma malignant | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphoma malignant lymphocytic | | | | | X | | | | | | | | | | | X | | | | | | | | | |

TABLE B2
**Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene: 625 ppm**
(continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Number of Days on Study** | 4 | 4 | 4 | 4 | 4 | |
| | 2 | 2 | 4 | 4 | 5 | |
| | 5 | 5 | 1 | 3 | 0 | |
| **Carcass ID Number** | 1 | 1 | 1 | 1 | 1 | Total |
| | 7 | 7 | 6 | 6 | 6 | Tissues/ |
| | 2 | 3 | 5 | 2 | 7 | Tumors |
| | 3 | 1 | 4 | 5 | 4 | |
| **Urinary System** | | | | | | |
| Kidney | + | + | + | + | + | 80 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | 1 |
| Histiocytic sarcoma | | | | | | 4 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | 1 |
| Urinary bladder | + | + | + | + | + | 75 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | 1 |
| **Systemic Lesions** | | | | | | |
| Multiple organs | + | + | + | + | + | 80 |
| Histiocytic sarcoma | | | | | | 4 |
| Lymphoma malignant | | | | | | 1 |
| Lymphoma malignant lymphocytic | | X | X | | | 31 |

**TABLE B3**
**Statistical Analysis of Primary Neoplasms in Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene**

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| **Adrenal Cortex: Adenoma** | | | | | | |
| Overall rate[a] | 1/50 (2%) | 0/49 (0%) | 0/48 (0%) | 0/49 (0%) | 3/50 (6%) | 0/78 (0%) |
| Adjusted rate[b] | 2.7% | 0.0% | 0.0% | 0.0% | 19.2% | 0.0% |
| Terminal rate[c] | 1/37 (3%) | 0/33 (0%) | 0/24 (0%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | 733 (T) | –[e] | – | – | 370 | – |
| Life table test[d] | P=0.146 | P=0.523N | P=0.586N | P=0.740N | P=0.024 | – |
| Logistic regression test[d] | P=0.455N | P=0.523N | P=0.586N | P=0.740N | P=0.450 | – |
| Cochran-Armitage test[d] | P=0.527N | | | | | |
| Fisher exact test[d] | | P=0.505N | P=0.510N | P=0.505N | P=0.309 | P=0.391N |
| **Harderian Gland: Adenoma** | | | | | | |
| Overall rate | 8/50 (16%) | 10/50 (20%) | 6/50 (12%) | 15/50 (30%) | 20/50 (40%) | 9/80 (11%) |
| Adjusted rate | 20.8% | 29.2% | 20.7% | 61.0% | 89.3% | 45.2% |
| Terminal rate | 7/37 (19%) | 9/33 (27%) | 4/24 (17%) | 4/11 (36%) | 0/0 | 0/0 |
| First incidence (days) | 658 | 722 | 569 | 532 | 370 | 307 |
| Life table test | P<0.001 | P=0.304 | P=0.544 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.046 | P=0.356 | P=0.511N | P=0.016 | P=0.001 | P=0.176 |
| Cochran-Armitage test | P=0.105N | | | | | |
| Fisher exact test | | P=0.398 | P=0.387N | P=0.077 | P=0.007 | P=0.300N |
| **Harderian Gland: Adenoma or Carcinoma** | | | | | | |
| Overall rate | 8/50 (16%) | 10/50 (20%) | 7/50 (14%) | 15/50 (30%) | 20/50 (40%) | 9/80 (11%) |
| Adjusted rate | 20.8% | 29.2% | 22.5% | 61.0% | 89.3% | 45.2% |
| Terminal rate | 7/37 (19%) | 9/33 (27%) | 4/24 (17%) | 4/11 (36%) | 0/0 | 0/0 |
| First incidence (days) | 658 | 722 | 541 | 532 | 370 | 307 |
| Life table test | P<0.001 | P=0.304 | P=0.426 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.061 | P=0.356 | P=0.575N | P=0.016 | P=0.001 | P=0.176 |
| Cochran-Armitage test | P=0.090N | | | | | |
| Fisher exact test | | P=0.398 | P=0.500N | P=0.077 | P=0.007 | P=0.300N |
| **Heart: Hemangiosarcoma** | | | | | | |
| Overall rate | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) | 1/49 (2%) | 21/50 (42%) | 23/80 (29%) |
| Adjusted rate | 0.0% | 0.0% | 0.0% | 4.0% | 100.0% | 100.0% |
| Terminal rate | 0/37 (0%) | 0/33 (0%) | 0/24 (0%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | – | – | – | 649 | 343 | 307 |
| Life table test | P<0.001 | – | – | P=0.392 | P<0.001 | P<0.001 |
| Logistic regression test | P<0.001 | – | – | P=0.521 | P<0.001 | P<0.001 |
| Cochran-Armitage test | P<0.001 | | | | | |
| Fisher exact test | | – | – | P=0.495 | P<0.001 | P<0.001 |
| **Liver: Hepatocellular Adenoma** | | | | | | |
| Overall rate | 11/49 (22%) | 10/49 (20%) | 9/50 (18%) | 14/50 (28%) | 12/50 (24%) | 1/80 (1%) |
| Adjusted rate | 29.7% | 27.8% | 30.3% | 65.8% | 89.0% | 100.0% |
| Terminal rate | 11/37 (30%) | 8/33 (24%) | 6/24 (25%) | 5/11 (45%) | 0/0 | 0/0 |
| First incidence (days) | 733 (T) | 519 | 365 | 485 | 370 | 450 |
| Life table test | P<0.001 | P=0.590 | P=0.419 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.599N | P=0.531N | P=0.519N | P=0.025 | P=0.009 | P=0.505 |
| Cochran-Armitage test | P<0.001N | | | | | |
| Fisher exact test | | P=0.500N | P=0.382N | P=0.343 | P=0.522 | P<0.001N |

**TABLE B3**
**Statistical Analysis of Primary Neoplasms in Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| **Liver: Hepatocellular Carcinoma** | | | | | | |
| Overall rate | 4/49 (8%) | 6/49 (12%) | 8/50 (16%) | 9/50 (18%) | 8/50 (16%) | 1/80 (1%) |
| Adjusted rate | 10.3% | 14.5% | 25.0% | 39.9% | 82.7% | 12.5% |
| Terminal rate | 3/37 (8%) | 2/33 (6%) | 3/24 (13%) | 2/11 (18%) | 0/0 | 0/0 |
| First incidence (days) | 677 | 467 | 600 | 546 | 353 | 418 |
| Life table test | P<0.001 | P=0.330 | P=0.064 | P=0.003 | P<0.001 | P=0.150 |
| Logistic regression test | P=0.178 | P=0.381 | P=0.141 | P=0.066 | P=0.006 | P=0.910 |
| Cochran-Armitage test | P=0.003N | | | | | |
| Fisher exact test | | P=0.370 | P=0.188 | P=0.125 | P=0.188 | P=0.069N |
| **Liver: Hepatocellular Adenoma or Carcinoma** | | | | | | |
| Overall rate | 15/49 (31%) | 14/49 (29%) | 15/50 (30%) | 19/50 (38%) | 16/50 (32%) | 2/80 (3%) |
| Adjusted rate | 39.3% | 34.3% | 45.5% | 74.8% | 91.7% | 100.0% |
| Terminal rate | 14/37 (38%) | 8/33 (24%) | 8/24 (33%) | 6/11 (55%) | 0/0 | 0/0 |
| First incidence (days) | 677 | 467 | 365 | 485 | 353 | 418 |
| Life table test | P<0.001 | P=0.555 | P=0.162 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.497 | P=0.504N | P=0.441 | P=0.027 | P=0.008 | P=0.302 |
| Cochran-Armitage test | P<0.001N | | | | | |
| Fisher exact test | | P=0.500N | P=0.560N | P=0.287 | P=0.527 | P<0.001N |
| **Lung: Alveolar/bronchiolar Adenoma** | | | | | | |
| Overall rate | 4/50 (8%) | 11/50 (22%) | 12/50 (24%) | 17/50 (34%) | 14/50 (28%) | 17/78 (22%) |
| Adjusted rate | 10.5% | 30.9% | 40.7% | 64.8% | 100.0% | 100.0% |
| Terminal rate | 3/37 (8%) | 9/33 (27%) | 8/24 (33%) | 4/11 (36%) | 0/0 | 0/0 |
| First incidence (days) | 714 | 524 | 492 | 443 | 408 | 275 |
| Life table test | P<0.001 | P=0.031 | P=0.003 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.002 | P=0.039 | P=0.013 | P<0.001 | P=0.002 | P=0.010 |
| Cochran-Armitage test | P=0.472 | | | | | |
| Fisher exact test | | P=0.045 | P=0.027 | P=0.001 | P=0.009 | P=0.032 |
| **Lung: Alveolar/bronchiolar Adenocarcinoma or Carcinoma** | | | | | | |
| Overall rate | 0/50 (0%) | 5/50 (10%) | 11/50 (22%) | 9/50 (18%) | 19/50 (38%) | 8/78 (10%) |
| Adjusted rate | 0.0% | 13.3% | 42.9% | 40.8% | 100.0% | 100.0% |
| Terminal rate | 0/37 (0%) | 3/33 (9%) | 10/24 (42%) | 3/11 (27%) | 0/0 | 0/0 |
| First incidence (days) | – | 519 | 507 | 532 | 373 | 307 |
| Life table test | P<0.001 | P=0.029 | P<0.001 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.001 | P=0.034 | P<0.001 | P=0.002 | P<0.001 | P=0.012 |
| Cochran-Armitage test | P=0.454N | | | | | |
| Fisher exact test | | P=0.028 | P<0.001 | P=0.001 | P<0.001 | P=0.016 |
| **Lung: Alveolar/bronchiolar Adenoma, Adenocarcinoma, or Carcinoma** | | | | | | |
| Overall rate | 4/50 (8%) | 15/50 (30%) | 19/50 (38%) | 24/50 (48%) | 25/50 (50%) | 22/78 (28%) |
| Adjusted rate | 10.5% | 39.5% | 63.7% | 78.5% | 100.0% | 100.0% |
| Terminal rate | 3/37 (8%) | 11/33 (33%) | 14/24 (58%) | 6/11 (55%) | 0/0 | 0/0 |
| First incidence (days) | 714 | 519 | 492 | 443 | 373 | 275 |
| Life table test | P<0.001 | P=0.004 | P<0.001 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P<0.001 | P=0.005 | P<0.001 | P<0.001 | P<0.001 | P<0.001 |
| Cochran-Armitage test | P=0.488N | | | | | |
| Fisher exact test | | P=0.005 | P<0.001 | P<0.001 | P<0.001 | P=0.004 |

TABLE B3
**Statistical Analysis of Primary Neoplasms in Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| **Mammary Gland: Adenoacanthoma** | | | | | | |
| Overall rate | 0/50 (0%) | 1/50 (2%) | 2/50 (4%) | 6/50 (12%) | 4/50 (8%) | 0/80 (0%) |
| Adjusted rate | 0.0% | 2.9% | 7.7% | 32.5% | 13.6% | 0.0% |
| Terminal rate | 0/37 (0%) | 0/33 (0%) | 1/24 (4%) | 2/11 (18%) | 0/0 | 0/0 |
| First incidence (days) | – | 732 | 686 | 579 | 268 | – |
| Life table test | P=0.025 | P=0.489 | P=0.152 | P<0.001 | P=0.021 | – |
| Logistic regression test | P=0.244N | P=0.492 | P=0.193 | P=0.005 | P=0.331 | – |
| Cochran-Armitage test | P=0.107N | | | | | |
| Fisher exact test | | P=0.500 | P=0.247 | P=0.013 | P=0.059 | – |
| **Mammary Gland: Carcinoma** | | | | | | |
| Overall rate | 0/50 (0%) | 2/50 (4%) | 2/50 (4%) | 6/50 (12%) | 11/50 (22%) | 12/80 (15%) |
| Adjusted rate | 0.0% | 5.8% | 5.7% | 16.2% | 39.1% | 100.0% |
| Terminal rate | 0/37 (0%) | 1/33 (3%) | 0/24 (0%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | – | 732 | 645 | 392 | 370 | 280 |
| Life table test | P<0.001 | P=0.221 | P=0.192 | P=0.008 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.050 | P=0.228 | P=0.257 | P=0.076 | P=0.009 | P=0.004 |
| Cochran-Armitage test | P=0.006 | | | | | |
| Fisher exact test | | P=0.247 | P=0.247 | P=0.013 | P<0.001 | P=0.002 |
| **Mammary Gland: Malignant Mixed Tumor** | | | | | | |
| Overall rate | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) | 4/80 (5%) |
| Adjusted rate | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 29.4% |
| Terminal rate | 0/37 (0%) | 0/33 (0%) | 0/24 (0%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | – | – | – | – | – | 335 |
| Life table test | P<0.001 | – | – | – | – | P=0.003 |
| Logistic regression test | P=0.041 | – | – | – | – | P=0.276 |
| Cochran-Armitage test | P=0.001 | | | | | |
| Fisher exact test | | – | – | – | – | P=0.139 |
| **Ovary: Adenoma** | | | | | | |
| Overall rate | 2/49 (4%) | 4/49 (8%) | 1/48 (2%) | 2/50 (4%) | 1/50 (2%) | 1/79 (1%) |
| Adjusted rate | 5.6% | 12.1% | 4.2% | 13.9% | 7.7% | 1.5% |
| Terminal rate | 2/36 (6%) | 4/33 (12%) | 1/24 (4%) | 1/11 (9%) | 0/0 | 0/0 |
| First incidence (days) | 733 (T) | 733 (T) | 733 (T) | 665 | 543 | 257 |
| Life table test | P=0.040 | P=0.296 | P=0.640N | P=0.284 | P=0.242 | P=0.561 |
| Logistic regression test | P=0.474 | P=0.296 | P=0.640N | P=0.446 | P=0.729 | P=0.945N |
| Cochran-Armitage test | P=0.123N | | | | | |
| Fisher exact test | | P=0.339 | P=0.508N | P=0.684N | P=0.492N | P=0.326N |
| **Ovary: Benign Granulosa Cell Tumor** | | | | | | |
| Overall rate | 1/49 (2%) | 0/49 (0%) | 1/48 (2%) | 6/50 (12%) | 6/50 (12%) | 6/79 (8%) |
| Adjusted rate | 2.8% | 0.0% | 3.2% | 28.5% | 100.0% | 27.1% |
| Terminal rate | 1/36 (3%) | 0/33 (0%) | 0/24 (0%) | 1/11 (9%) | 0/0 | 0/0 |
| First incidence (days) | 733 (T) | – | 677 | 608 | 393 | 311 |
| Life table test | P<0.001 | P=0.517N | P=0.680 | P=0.003 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.030 | P=0.517N | P=0.735 | P=0.026 | P=0.020 | P=0.303 |
| Cochran-Armitage test | P=0.134 | | | | | |
| Fisher exact test | | P=0.500N | P=0.747 | P=0.059 | P=0.059 | P=0.175 |

**TABLE B3**
**Statistical Analysis of Primary Neoplasms in Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| **Ovary: Malignant Granulosa Cell Tumor** | | | | | | |
| Overall rate | 0/49 (0%) | 0/49 (0%) | 0/48 (0%) | 3/50 (6%) | 2/50 (4%) | 0/79 (0%) |
| Adjusted rate | 0.0% | 0.0% | 0.0% | 19.3% | 54.2% | 0.0% |
| Terminal rate | 0/36 (0%) | 0/33 (0%) | 0/24 (0%) | 1/11 (9%) | 0/0 | 0/0 |
| First incidence (days) | – | – | – | 645 | 569 | – |
| Life table test | P<0.001 | – | – | P=0.018 | P=0.003 | – |
| Logistic regression test | P=0.068 | – | – | P=0.046 | P=0.037 | – |
| Cochran-Armitage test | P=0.373N | | | | | |
| Fisher exact test | | – | – | P=0.125 | P=0.253 | – |
| **Ovary: Benign Mixed Tumor** | | | | | | |
| Overall rate | 0/49 (0%) | 0/49 (0%) | 0/48 (0%) | 2/50 (4%) | 5/50 (10%) | 1/79 (1%) |
| Adjusted rate | 0.0% | 0.0% | 0.0% | 13.6% | 100.0% | 2.6% |
| Terminal rate | 0/36 (0%) | 0/33 (0%) | 0/24 (0%) | 1/11 (9%) | 0/0 | 0/0 |
| First incidence (days) | – | – | – | 664 | 460 | 328 |
| Life table test | P<0.001 | – | – | P=0.067 | P<0.001 | P=0.445 |
| Logistic regression test | P=0.430 | – | – | P=0.138 | P=0.010 | P=0.987 |
| Cochran-Armitage test | P=0.518 | | | | | |
| Fisher exact test | | – | – | P=0.253 | P=0.030 | P=0.617 |
| **Pituitary Gland (Pars Distalis): Adenoma** | | | | | | |
| Overall rate | 7/50 (14%) | 12/49 (24%) | 5/48 (10%) | 4/47 (9%) | 0/48 (0%) | 0/71 (0%) |
| Adjusted rate | 17.4% | 33.7% | 17.5% | 24.0% | 0.0% | 0.0% |
| Terminal rate | 5/37 (14%) | 10/33 (30%) | 3/24 (13%) | 2/11 (18%) | 0/0 | 0/0 |
| First incidence (days) | 625 | 653 | 645 | 594 | – | – |
| Life table test | P=0.955N | P=0.107 | P=0.600 | P=0.378 | P=0.861N | – |
| Logistic regression test | P=0.252N | P=0.135 | P=0.506N | P=0.547N | P=0.287N | P=0.852N |
| Cochran-Armitage test | P<0.001N | | | | | |
| Fisher exact test | | P=0.142 | P=0.409N | P=0.299N | P=0.007N | P=0.002N |
| **Skin (Subcutaneous Tissue): Sarcoma** | | | | | | |
| Overall rate | 1/50 (2%) | 2/50 (4%) | 2/50 (4%) | 5/50 (10%) | 3/50 (6%) | 3/80 (4%) |
| Adjusted rate | 2.4% | 5.3% | 5.7% | 20.3% | 43.0% | 19.3% |
| Terminal rate | 0/37 (0%) | 1/33 (3%) | 0/24 (0%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | 677 | 642 | 650 | 597 | 524 | 316 |
| Life table test | P<0.001 | P=0.476 | P=0.415 | P=0.017 | P=0.002 | P=0.013 |
| Logistic regression test | P=0.043 | P=0.507 | P=0.532 | P=0.424 | P=0.117 | P=0.687 |
| Cochran-Armitage test | P=0.471N | | | | | |
| Fisher exact test | | P=0.500 | P=0.500 | P=0.102 | P=0.309 | P=0.501 |
| **Skin (Subcutaneous Tissue): Neurofibrosarcoma or Sarcoma** | | | | | | |
| Overall rate | 1/50 (2%) | 2/50 (4%) | 3/50 (6%) | 5/50 (10%) | 3/50 (6%) | 3/80 (4%) |
| Adjusted rate | 2.4% | 5.3% | 8.0% | 20.3% | 43.0% | 19.3% |
| Terminal rate | 0/37 (0%) | 1/33 (3%) | 0/24 (0%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | 677 | 642 | 569 | 597 | 524 | 316 |
| Life table test | P<0.001 | P=0.476 | P=0.238 | P=0.017 | P=0.002 | P=0.013 |
| Logistic regression test | P=0.061 | P=0.507 | P=0.368 | P=0.424 | P=0.117 | P=0.687 |
| Cochran-Armitage test | P=0.403N | | | | | |
| Fisher exact test | | P=0.500 | P=0.309 | P=0.102 | P=0.309 | P=0.501 |

**TABLE B3**
**Statistical Analysis of Primary Neoplasms in Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| **Small Intestine: Adenoma or Carcinoma** | | | | | | |
| Overall rate | 0/50 (0%) | 3/50 (6%) | 0/50 (0%) | 1/50 (2%) | 0/50 (0%) | 0/80 (0%) |
| Adjusted rate | 0.0% | 9.1% | 0.0% | 4.3% | 0.0% | 0.0% |
| Terminal rate | 0/37 (0%) | 3/33 (9%) | 0/24 (0%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | – | 733 (T) | – | 653 | – | – |
| Life table test | P=1.000 | P=0.101 | – | P=0.375 | – | – |
| Logistic regression test | P=0.988N | P=0.101 | – | P=0.516 | – | – |
| Cochran-Armitage test | P=0.165N | | | | | |
| Fisher exact test | | P=0.121 | – | P=0.500 | – | – |
| **Stomach (Forestomach): Squamous Cell Papilloma** | | | | | | |
| Overall rate | 0/50 (0%) | 0/50 (0%) | 2/50 (4%) | 1/50 (2%) | 3/50 (6%) | 16/80 (20%) |
| Adjusted rate | 0.0% | 0.0% | 8.3% | 9.1% | 100.0% | 100.0% |
| Terminal rate | 0/37 (0%) | 0/33 (0%) | 2/24 (8%) | 1/11 (9%) | 0/0 | 0/0 |
| First incidence (days) | – | – | 733 (T) | 733 (T) | 470 | 246 |
| Life table test | P<0.001 | – | P=0.149 | P=0.260 | P=0.004 | P<0.001 |
| Logistic regression test | P<0.001 | – | P=0.149 | P=0.260 | P=0.078 | P=0.002 |
| Cochran-Armitage test | P<0.001 | | | | | |
| Fisher exact test | | – | P=0.247 | P=0.500 | P=0.121 | P<0.001 |
| **Stomach (Forestomach): Squamous Cell Carcinoma** | | | | | | |
| Overall rate | 0/50 (0%) | 0/50 (0%) | 1/50 (2%) | 1/50 (2%) | 1/50 (2%) | 6/80 (8%) |
| Adjusted rate | 0.0% | 0.0% | 4.2% | 8.3% | 3.8% | 70.5% |
| Terminal rate | 0/37 (0%) | 0/33 (0%) | 1/24 (4%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | – | – | 733 (T) | 723 | 472 | 275 |
| Life table test | P<0.001 | – | P=0.414 | P=0.277 | P=0.374 | P<0.001 |
| Logistic regression tests | P=0.009 | – | P=0.414 | P=0.330 | P=0.750 | P=0.041 |
| Cochran-Armitage test | P=0.003 | | | | | |
| Fisher exact test | | – | P=0.500 | P=0.500 | P=0.500 | P=0.050 |
| **Stomach (Forestomach): Squamous Cell Papilloma or Squamous Cell Carcinoma** | | | | | | |
| Overall rate | 0/50 (0%) | 0/50 (0%) | 3/50 (6%) | 2/50 (4%) | 4/50 (8%) | 22/80 (28%) |
| Adjusted rate | 0.0% | 0.0% | 12.5% | 16.7% | 100.0% | 100.0% |
| Terminal rate | 0/37 (0%) | 0/33 (0%) | 3/24 (13%) | 1/11 (9%) | 0/0 | 0/0 |
| First incidence (days) | – | – | 733 (T) | 723 | 470 | 246 |
| Life table test | P<0.001 | – | P=0.056 | P=0.044 | P=0.001 | P<0.001 |
| Logistic regression test | P<0.001 | – | P=0.056 | P=0.060 | P=0.056 | P<0.001 |
| Cochran-Armitage test | P<0.001 | | | | | |
| Fisher exact test | | – | P=0.121 | P=0.247 | P=0.059 | P<0.001 |
| **All Organs: Hemangioma** | | | | | | |
| Overall rate | 2/50 (4%) | 2/50 (4%) | 1/50 (2%) | 4/50 (8%) | 1/50 (2%) | 0/80 (0%) |
| Adjusted rate | 5.1% | 5.0% | 4.2% | 16.3% | 2.7% | 0.0% |
| Terminal rate | 1/37 (3%) | 0/33 (0%) | 1/24 (4%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | 708 | 572 | 733 (T) | 594 | 411 | – |
| Life table test | P=0.407 | P=0.667 | P=0.657N | P=0.078 | P=0.444 | – |
| Logistic regression test | P=0.263N | P=0.690N | P=0.617N | P=0.277 | P=0.680N | – |
| Cochran-Armitage test | P=0.054N | | | | | |
| Fisher exact test | | P=0.691N | P=0.500N | P=0.339 | P=0.500N | P=0.146N |

**Table B3**
**Statistical Analysis of Primary Neoplasms in Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| **All Organs: Hemangiosarcoma** | | | | | | |
| Overall rate | 3/50 (6%) | 2/50 (4%) | 2/50 (4%) | 5/50 (10%) | 23/50 (46%) | 27/80 (34%) |
| Adjusted rate | 8.1% | 5.2% | 8.3% | 31.8% | 100.0% | 100.0% |
| Terminal rate | 3/37 (8%) | 1/33 (3%) | 2/24 (8%) | 2/11 (18%) | 0/0 | 0/0 |
| First incidence (days) | 733 (T) | 572 | 733 (T) | 649 | 343 | 307 |
| Life table test | P<0.001 | P=0.543N | P=0.671 | P=0.021 | P<0.001 | P<0.001 |
| Logistic regression test | P<0.001 | P=0.504N | P=0.671 | P=0.081 | P<0.001 | P<0.001 |
| Cochran-Armitage test | P<0.001 | | | | | |
| Fisher exact test | | P=0.500N | P=0.500N | P=0.357 | P<0.001 | P<0.001 |
| **All Organs: Hemangioma or Hemangiosarcoma** | | | | | | |
| Overall rate | 5/50 (10%) | 3/50 (6%) | 3/50 (6%) | 9/50 (18%) | 24/50 (48%) | 27/80 (34%) |
| Adjusted rate | 13.0% | 7.9% | 12.5% | 42.9% | 100.0% | 100.0% |
| Terminal rate | 4/37 (11%) | 1/33 (3%) | 3/24 (13%) | 2/11 (18%) | 0/0 | 0/0 |
| First incidence (days) | 708 | 572 | 733 (T) | 594 | 343 | 307 |
| Life table test | P<0.001 | P=0.409N | P=0.611N | P=0.003 | P<0.001 | P<0.001 |
| Logistic regression test | P<0.001 | P=0.368N | P=0.592N | P=0.041 | P<0.001 | P<0.001 |
| Cochran-Armitage test | P<0.001 | | | | | |
| Fisher exact test | | P=0.357N | P=0.357N | P=0.194 | P<0.001 | P=0.002 |
| **All Organs: Malignant Lymphoma (Lymphocytic, Mixed, NOS, or Undifferentiated Cell Type)** | | | | | | |
| Overall rate | 6/50 (12%) | 12/50 (24%) | 11/50 (22%) | 7/50 (14%) | 9/50 (18%) | 32/80 (40%) |
| Adjusted rate | 14.6% | 34.0% | 38.7% | 35.9% | 39.7% | 70.8% |
| Terminal rate | 3/37 (8%) | 10/33 (30%) | 8/24 (33%) | 3/11 (27%) | 0/0 | 0/0 |
| First incidence (days) | 623 | 695 | 533 | 407 | 205 | 189 |
| Life table test | P<0.001 | P=0.068 | P=0.029 | P=0.055 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.012 | P=0.081 | P=0.091 | P=0.487 | P=0.582N | P=0.272N |
| Cochran-Armitage test | P<0.001 | | | | | |
| Fisher exact test | | P=0.096 | P=0.143 | P=0.500 | P=0.288 | P<0.001 |
| **All Organs: Histiocytic Sarcoma** | | | | | | |
| Overall rate | 3/50 (6%) | 2/50 (4%) | 7/50 (14%) | 4/50 (8%) | 7/50 (14%) | 4/80 (5%) |
| Adjusted rate | 6.9% | 4.5% | 20.0% | 17.7% | 28.1% | 10.3% |
| Terminal rate | 0/37 (0%) | 0/33 (0%) | 1/24 (4%) | 0/11 (0%) | 0/0 | 0/0 |
| First incidence (days) | 485 | 467 | 492 | 524 | 344 | 300 |
| Life table test | P<0.001 | P=0.518N | P=0.077 | P=0.195 | P=0.002 | P=0.038 |
| Logistic regression test | P=0.188N | P=0.411N | P=0.238 | P=0.669 | P=0.514 | P=0.518N |
| Cochran-Armitage test | P=0.273N | | | | | |
| Fisher exact test | | P=0.500N | P=0.159 | P=0.500 | P=0.159 | P=0.549N |
| **All Organs: Malignant Lymphoma or Histiocytic Sarcoma** | | | | | | |
| Overall rate | 9/50 (18%) | 14/50 (28%) | 18/50 (36%) | 11/50 (22%) | 16/50 (32%) | 36/80 (45%) |
| Adjusted rate | 20.5% | 37.0% | 52.1% | 47.2% | 56.7% | 73.9% |
| Terminal rate | 3/37 (8%) | 10/33 (30%) | 9/24 (38%) | 3/11 (27%) | 0/0 | 0/0 |
| First incidence (days) | 485 | 467 | 492 | 407 | 205 | 189 |
| Life table test | P<0.001 | P=0.136 | P=0.005 | P=0.021 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.257 | P=0.168 | P=0.036 | P=0.496 | P=0.619 | P=0.111N |
| Cochran-Armitage test | P=0.001 | | | | | |
| Fisher exact test | | P=0.171 | P=0.035 | P=0.402 | P=0.083 | P=0.001 |

TABLE B3
**Statistical Analysis of Primary Neoplasms in Female Mice in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| **All Organs: Benign Neoplasms** | | | | | | |
| Overall rate | 28/50 (56%) | 36/50 (72%) | 24/50 (48%) | 38/50 (76%) | 36/50 (72%) | 37/80 (46%) |
| Adjusted rate | 66.5% | 87.6% | 68.5% | 97.4% | 100.0% | 100.0% |
| Terminal rate | 23/37 (62%) | 28/33 (85%) | 14/24 (58%) | 10/11 (91%) | 0/0 | 0/0 |
| First incidence (days) | 625 | 519 | 365 | 443 | 370 | 246 |
| Life table test | P<0.001 | P=0.025 | P=0.191 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P<0.001 | P=0.040 | P=0.498N | P<0.001 | P<0.001 | P<0.001 |
| Cochran-Armitage test | P=0.010N | | | | | |
| Fisher exact test | | P=0.072 | P=0.274N | P=0.028 | P=0.072 | P=0.184N |
| **All Organs: Malignant Neoplasms** | | | | | | |
| Overall rate | 15/50 (30%) | 32/50 (64%) | 40/50 (80%) | 42/50 (84%) | 49/50 (98%) | 71/80 (89%) |
| Adjusted rate | 33.8% | 70.7% | 85.1% | 92.9% | 100.0% | 100.0% |
| Terminal rate | 8/37 (22%) | 20/33 (61%) | 17/24 (71%) | 8/11 (73%) | 0/0 | 0/0 |
| First incidence (days) | 485 | 467 | 492 | 392 | 205 | 189 |
| Life table test | P<0.001 | P<0.001 | P<0.001 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P<0.001 | P<0.001 | P<0.001 | P<0.001 | P<0.001 | P=0.003 |
| Cochran-Armitage test | P<0.001 | | | | | |
| Fisher exact test | | P<0.001 | P<0.001 | P<0.001 | P<0.001 | P<0.001 |
| **All Organs: Benign or Malignant Neoplasms** | | | | | | |
| Overall rate | 35/50 (70%) | 47/50 (94%) | 43/50 (86%) | 48/50 (96%) | 49/50 (98%) | 72/80 (90%) |
| Adjusted rate | 76.0% | 97.9% | 89.6% | 100.0% | 100.0% | 100.0% |
| Terminal rate | 26/37 (70%) | 32/33 (97%) | 19/24 (79%) | 11/11 (100%) | 0/0 | 0/0 |
| First incidence (days) | 485 | 467 | 365 | 392 | 205 | 189 |
| Life table test | P<0.001 | P=0.006 | P<0.001 | P<0.001 | P<0.001 | P<0.001 |
| Logistic regression test | P=0.003 | P<0.001 | P=0.017 | P<0.001 | P<0.001 | P<0.001 |
| Cochran-Armitage test | P=0.175 | | | | | |
| Fisher exact test | | P=0.002 | P=0.045 | P<0.001 | P<0.001 | P=0.004 |

(T)Terminal sacrifice

[a] Number of neoplasm-bearing animals/number of animals examined. Denominator is number of animals examined microscopically for adrenal gland, bone marrow, brain, clitoral gland, gallbladder, heart, kidney, larynx, liver, lung, nose, ovary, pancreas, parathyroid gland, pituitary gland, salivary gland, spleen, thyroid gland, and urinary bladder; for other tissues, denominator is number of animals necropsied.

[b] Kaplan-Meier estimated neoplasm incidence at the end of the study after adjustment for intercurrent mortality

[c] Observed incidence at terminal kill

[d] Beneath the control incidence are the P values associated with the trend test. Beneath the dosed group incidence are the P values corresponding to pairwise comparisons between the controls and that dosed group. The life table analysis regards neoplasms in animals dying prior to terminal kill as being (directly or indirectly) the cause of death. The logistic regression test regards these lesions as nonfatal. The Cochran-Armitage and Fisher exact tests compare directly the overall incidence rates. For all tests, a negative trend or a lower incidence in a dose group is indicated by N.

[e] Not applicable; no neoplasms in animal group

**TABLE B4a**
**Historical Incidence of Malignant Lymphomas and Histiocytic Sarcomas in Untreated Female B6C3F$_1$ Mice[a]**

| Study | Incidence in Controls | |
|---|---|---|
| | Malignant Lymphoma | Histiocytic Sarcoma |
| **Historical Incidence at Battelle Northwest Laboratories** | | |
| Allyl glycidyl ether | 22/50 | 3/50 |
| α-Chloroacetophenone | 22/50 | 1/50 |
| Epinephrine hydrochloride | 16/50 | 1/50 |
| Ethyl chloride | 4/49 | 0/49 |
| *o*-Chlorobenzalmalononitrile (CS2) | 21/50 | 0/50 |
| **Overall Historical Incidence** | | |
| Total | 153/561 (27.3%) | 10/561 (1.8%) |
| Standard deviation | 15.1% | 3.3% |
| Range | 8%-44% | 0%-6% |

[a] Data as of 3 April 1991. Data for malignant lymphoma includes data for histiocytic, lymphocytic, mixed, NOS, or undifferentiated cell type lymphomas.

**TABLE B4b**
**Historical Incidence of Cardiac Hemangiosarcomas in Untreated Female B6C3F$_1$ Mice[a]**

| Study | Incidence in Controls |
|---|---|
| **Historical Incidence at Battelle Northwest Laboratories** | |
| Allyl glycidyl ether | 0/50 |
| α-Chloroacetophenone | 0/50 |
| Epinephrine hydrochloride | 0/50 |
| Ethyl chloride | 0/49 |
| *o*-Chlorobenzalmalononitrile (CS2) | 0/50 |
| **Overall Historical Incidence** | |
| Total | 0/558 (0.0%) |
| Upper 95% confidence limit | 0.5% |

[a] Data as of 3 April 1991.

**TABLE B4c**
**Historical Incidence of Lung Neoplasms in Untreated Female B6C3F$_1$ Mice[a]**

| Study | Incidence in Controls | | |
|---|---|---|---|
| | Alveolar/bronchiolar Adenoma | Alveolar/bronchiolar Carcinoma | Alveolar/bronchiolar Adenoma or Carcinoma |
| **Historical Incidence at Battelle Northwest Laboratories** | | | |
| Allyl glycidyl ether | 0/50 | 0/50 | 0/50 |
| α-Chloroacetophenone | 4/50 | 3/50 | 6/50 |
| Epinephrine hydrochloride | 3/50 | 2/50 | 5/50 |
| Ethyl chloride | 2/49 | 3/49 | 5/49 |
| *o*-Chlorobenzalmalononitrile (CS2) | 4/50 | 1/50 | 5/50 |
| **Overall Historical Incidence** | | | |
| Total | 32/560 (5.7%) | 16/560 (2.9%) | 47/560 (8.4%) |
| Standard deviation | 2.9% | 2.4% | 3.3% |
| Range | 0%-10% | 0%-6% | 0%-12% |

[a] Data as of 3 April 1991

**TABLE B4d**
**Historical Incidence of Forestomach Neoplasms in Untreated Female B6C3F$_1$ Mice[a]**

| Study | Incidence in Controls | | |
|---|---|---|---|
| | Squamous Cell Papilloma | Squamous Cell Carcinoma | Squamous Cell Papilloma or Squamous Cell Carcinoma |
| **Historical Incidence at Battelle Northwest Laboratories** | | | |
| Allyl glycidyl ether | 1/50 | 0/50 | 1/50 |
| α-Chloroacetophenone | 0/50 | 1/50 | 1/50 |
| Epinephrine hydrochloride | 0/50 | 0/50 | 0/50 |
| Ethyl chloride | 0/49 | 0/49 | 0/49 |
| *o*-Chlorobenzalmalononitrile (CS2) | 2/50 | 1/50 | 2/50 |
| **Overall Historical Incidence** | | | |
| Total | 8/561 (1.4%) | 2/561 (0.4%) | 9/561 (1.6%) |
| Standard deviation | 2.1% | 0.8% | 2.1% |
| Range | 0%-6% | 0%-2% | 0%-6% |

[a] Data as of 3 April 1991

**TABLE B4e**
**Historical Incidence of Hepatocellular Neoplasms in Untreated Female B6C3F$_1$ Mice[a]**

| Study | Incidence in Controls | | |
|---|---|---|---|
| | Hepatocellular Adenoma | Hepatocellular Carcinoma | Hepatocellular Adenoma or Carcinoma |
| **Historical Incidence at Battelle Northwest Laboratories** | | | |
| Allyl glycidyl ether | 1/50 | 5/50 | 6/50 |
| α-Chloroacetophenone | 4/50 | 8/50 | 12/50 |
| l-epinephrine hydrochloride | 2/50 | 1/50 | 3/50 |
| Ethyl chloride | 0/49 | 3/49 | 3/49 |
| α-Chlorobenzalmalononitrile (CS2) | 4/50 | 7/50 | 11/50 |
| **Overall Historical Incidence** | | | |
| Total | 40/558 (7.2%) | 49/558 (8.8%) | 87/558 (15.6%) |
| Standard deviation | 5.1% | 5.2% | 8.4% |
| Range | 0%-18% | 0%-16% | 3%-27% |

[a] Data as of 3 April 1991

**TABLE B4f**
**Historical Incidence of Ovarian Granulosa Cell Tumors in Untreated Female B6C3F$_1$ Mice[a]**

| Study | Incidence in Controls | | | |
|---|---|---|---|---|
| | Benign | Malignant | NOS | Benign, Malignant, or NOS |
| **Historical Incidence at Battelle Northwest Laboratories** | | | | |
| Allyl glycidyl ether | 0/49 | 0/49 | 1/49 | 1/49 |
| α-Chloroacetophenone | 0/50 | 0/50 | 1/50 | 1/50 |
| l-epinephrine hydrochloride | 0/50 | 0/50 | 0/50 | 0/50 |
| Ethyl chloride | 0/49 | 0/49 | 0/49 | 0/49 |
| α-Chlorobenzalmalononitrile (CS2) | 0/50 | 0/50 | 0/50 | 0/50 |
| **Overall Historical Incidence** | | | | |
| Total | 1/548 (0.2%) | 1/548 (0.2%) | 2/548 (0.4%) | 4/548 (0.7%) |
| Standard deviation | 0.3% | 0.6% | 0.8% | 0.9% |
| Range | 0%-1% | 0%-2% | 0%-2% | 0%-2% |

[a] Data as of 3 April 1991

**TABLE B4g**
**Historical Incidence of Ovarian Neoplasms in Untreated Female B6C3F$_1$ Mice[a]**

| Study | Incidence in Controls | |
|---|---|---|
| | Adenoma | Benign Mixed Tumor |
| **Historical Incidence at Battelle Northwest Laboratories** | | |
| Allyl glycidyl ether | 0/49 | 0/49 |
| α-Chloroacetophenone | 0/50 | 0/50 |
| Epinephrine hydrochloride | 0/50 | 0/50 |
| Ethyl chloride | 0/49 | 0/49 |
| *o*-Chlorobenzalmalononitrile (CS2) | 1/50 | 0/50 |
| **Overall Historical Incidence** | | |
| Total | 2/548 (0.4%) | 0/548 (0.0%) |
| Standard deviation | 1.0% | |
| Range | 0%-3% | |

[a] Data as of 3 April 1991

**TABLE B4h**
**Historical Incidence of Harderian Gland Neoplasms in Untreated Female B6C3F$_1$ Mice[a]**

| Study | Incidence in Controls | | |
|---|---|---|---|
| | Adenoma | Carcinoma | Adenoma or Carcinoma |
| **Historical Incidence at Battelle Northwest Laboratories** | | | |
| Allyl glycidyl ether | 0/50 | 0/50 | 0/50 |
| α-Chloroacetophenone | 0/50 | 0/50 | 0/50 |
| Epinephrine hydrochloride | 1/50 | 1/50 | 2/50 |
| Ethyl chloride | 2/49 | 0/49 | 2/49 |
| *o*-Chlorobenzalmalononitrile (CS2) | 2/50 | 2/50 | 4/50 |
| **Overall Historical Incidence** | | | |
| Total | 10/561 (1.8%) | 3/561 (0.5%) | 13/561 (2.3%) |
| Standard deviation | 1.7% | 1.3% | 2.5% |
| Range | 0%-4% | 0%-4% | 0%-8% |

[a] Data as of 3 April 1991

TABLE B4i
Historical Incidence of Mammary Gland Adenoacanthomas and Carcinomas in Untreated Female B6C3F$_1$ Mice[a]

| Study | Incidence in Controls | |
|---|---|---|
| | Adenoacanthoma | Carcinoma |
| **Historical Incidence at Battelle Northwest Laboratories** | | |
| Allyl glycidyl ether | 0/50 | 4/50 |
| 4-Chloroacetophenone | 0/50 | 4/50 |
| Epinephrine hydrochloride | 0/50 | 1/50 |
| Ethyl chloride | 1/49 | 2/49 |
| o-Chlorobenzalmalononitrile (CS2) | 0/50 | 3/50 |
| **Overall Historical Incidence** | | |
| Total | 1/561 (0.2%) | 21/561 (3.7%) |
| Standard deviation | 0.6% | 2.8% |
| Range | 0%-2% | 0%-8% |

[a] Data as of 3 April 1991. Includes data for histiocytic, lymphocytic, mixed, NOS, or undifferentiated cell type lymphomas.

TABLE B4j
Historical Incidence of Renal Tubule Adenomas in Untreated Female B6C3F$_1$ Mice[a]

| Study | Incidence in Controls |
|---|---|
| **Historical Incidence at Battelle Northwest Laboratories** | |
| Allyl glycidyl ether | 0/50 |
| 4-Chloroacetophenone | 0/50 |
| Epinephrine hydrochloride | 0/50 |
| Ethyl chloride | 0/49 |
| o-Chlorobenzalmalononitrile (CS2) | 0/49 |
| **Overall Historical Incidence** | |
| Total | 0/559 (0.0%) |
| Upper 95% confidence limit | 0.5% |

[a] Data as of 3 April 1991

**TABLE B4k**
**Historical Incidence of Subcutaneous Skin Neoplasms in Untreated Female B6C3F$_1$ Mice[a]**

| Study | Incidence in Controls | | | | |
|---|---|---|---|---|---|
| | Hemangioma | Hemangiosarcoma | Neurofibrosarcoma | Sarcoma | Hemangi[illegible] Hemangi[illegible] Neurofibro[illegible] Sarco[illegible] |
| **Historical Incidence at Battelle Northwest Laboratories** | | | | | |
| Allyl glycidyl ether | 0/50 | 0/50 | 0/50 | 0/50 | [illegible] |
| α-Chloroacetophenone | 0/50 | 0/50 | 0/50 | 0/50 | [illegible] |
| Epinephrine hydrochloride | 0/50 | 0/50 | 0/50 | 0/50 | [illegible] |
| Ethyl chloride | 0/49 | 0/49 | 0/49 | 1/49 | 1/[illegible] |
| *o*-Chlorobenzalmalononitrile (CS2) | 0/50 | 1/50 | 0/50 | 1/50 | 2/[illegible] |
| **Overall Historical Incidence** | | | | | |
| Total | 0/561 (0.0%) | 1/561 (0.2%) | 0/561 (0.9%) | 2/561 (0.4%) | 3/561 ([illegible] |
| Standard deviation | | 0.6% | | 0.8% | 1.5[illegible] |
| Range | | 0%-2% | | 0%-2% | 0%-4[illegible] |

[a] Data as of 3 April 1991.

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene[a]**

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| **Disposition Summary** | | | | | | |
| Animals initially in study | 70 | 70 | 70 | 70 | 70 | 90 |
| *9-Month interim evaluation* | 10 | 10 | 10 | 10 | 10 | 8 |
| *15-Month interim evaluation* | 10 | 10 | 10 | 10 | 10 | 2 |
| Early deaths | | | | | | |
| Accident deaths | | | 1 | | 1 | 1 |
| Moribund | 10 | 10 | 14 | 31 | 37 | 46 |
| Natural deaths | 3 | 7 | 11 | 8 | 12 | 33 |
| Survivors | | | | | | |
| Terminal Sacrifice | 37 | 33 | 24 | 11 | | |
| Animals examined microscopically | 70 | 70 | 70 | 70 | 70 | 90 |
| ***9-Month Interim Evaluation*** | | | | | | |
| **Alimentary System** | | | | | | |
| Liver | (10) | | | (1) | (1) | (8) |
| Basophilic focus | | | | 1 (100%) | 1 (100%) | |
| Pancreas | (10) | | | | | (8) |
| Acinus, infarct | 1 (10%) | | | | | |
| Stomach, forestomach | (10) | | | (10) | (10) | (8) |
| Ulcer | | | | | | 3 (38%) |
| Epithelium, hyperplasia | | | | | 1 (10%) | 8 (100%) |
| **Cardiovascular System** | | | | | | |
| Heart | (10) | | | | (10) | (8) |
| Endothelium, hyperplasia | | | | | | 1 (13%) |
| **Endocrine System** | | | | | | |
| None | | | | | | |
| **General Body System** | | | | | | |
| None | | | | | | |
| **Genital System** | | | | | | |
| Ovary | (10) | | | (10) | (10) | (8) |
| Atrophy | | | | | 9 (90%) | 8 (100%) |
| Cyst | 1 (10%) | | | | | |
| Germinal epithelium, hyperplasia | | | | | | 1 (13%) |
| Uterus | (10) | | | (10) | (10) | (8) |
| Atrophy | | | | | 3 (30%) | 6 (75%) |
| Hyperplasia, cystic | 8 (80%) | | | 10 (100%) | 6 (60%) | |
| **Hematopoietic System** | | | | | | |
| Bone marrow | (10) | | | | (10) | (8) |
| Atrophy | | | | | | 1 (13%) |

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***9-Month Interim Evaluation*** (continued) | | | | | | |
| **Hematopoietic System** (continued) | | | | | | |
| Lymph node, mandibular | (6) | | | | (10) | (5) |
| Hyperplasia | | | | | 1 (10%) | |
| Lymph node, mesenteric | (10) | | | | (10) | (8) |
| Hyperplasia | | | | | 1 (10%) | |
| Thymus | (10) | | | | (10) | (8) |
| Necrosis | | | | | | 2 (25%) |
| **Integumentary System** | | | | | | |
| Mammary gland | (10) | | | (1) | (1) | (8) |
| Hyperplasia | | | | 1 (100%) | 1 (100%) | |
| **Musculoskeletal System** | | | | | | |
| Bone | (10) | | | | | (8) |
| Proliferation connective tissue | 1 (10%) | | | | | |
| **Nervous System** | | | | | | |
| Brain | (10) | | | | | (8) |
| Mineralization | | | | | | 1 (13%) |
| **Respiratory System** | | | | | | |
| Lung | (10) | | | (10) | (10) | (8) |
| Alveolar epithelium, hyperplasia | | | | | 1 (10%) | 1 (13%) |
| **Special Senses System** | | | | | | |
| Harderian gland | (5) | | | | (1) | (5) |
| Hyperplasia | | | | | 1 (100%) | |
| **Urinary System** | | | | | | |
| None | | | | | | |
| ***15-Month Interim Evaluation*** | | | | | | |
| **Alimentary System** | | | | | | |
| Intestine small, jejunum | (10) | | | (1) | (10) | (2) |
| Peyer's patch, hyperplasia | | | | 1 (100%) | | |
| Liver | (10) | (3) | (1) | (10) | (10) | (2) |
| Angiectasis | | | | | 1 (10%) | |
| Basophilic focus | | 1 (33%) | | 1 (10%) | 1 (10%) | |
| Clear cell focus | | | | 1 (10%) | | |

TABLE B5
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***15-Month Interim Evaluation*** (continued) | | | | | | |
| **Alimentary System** (continued) | | | | | | |
| Liver (continued) | (10) | (3) | (1) | (10) | (10) | (2) |
| Degeneration, fatty | 2 (20%) | | | 4 (40%) | 4 (40%) | |
| Eosinophilic focus | | 1 (33%) | 1 (100%) | | | |
| Mixed cell focus | | | | | 1 (10%) | |
| Necrosis | | | | | 3 (30%) | 2 (100%) |
| Pigmentation, bile | | | | | 1 (10%) | |
| Mesentery | | | (2) | | (3) | |
| Fat, hemorrhage | | | | | 1 (33%) | |
| Fat, inflammation, chronic | | | 1 (50%) | | 2 (67%) | |
| Fat, necrosis | | | 1 (50%) | | 1 (33%) | |
| Pancreas | (10) | | | | (10) | (2) |
| Acinus, focal cellular change | | | | | 1 (10%) | |
| Stomach, forestomach | (10) | (1) | (10) | (10) | (10) | (2) |
| Epithelium, hyperplasia | | | | 1 (10%) | 3 (30%) | 1 (50%) |
| **Cardiovascular System** | | | | | | |
| Heart | (10) | | | (10) | (10) | (2) |
| Endothelium, hyperplasia | | | | | 4 (40%) | |
| **Endocrine System** | | | | | | |
| Adrenal gland, cortex | (10) | | | | (10) | (2) |
| Hyperplasia | | | | | 1 (10%) | |
| Hypertrophy | | | | | 1 (10%) | |
| Thyroid gland | (10) | | | | (10) | (2) |
| Follicular cell, hyperplasia | | | | | 1 (10%) | |
| **General Body System** | | | | | | |
| None | | | | | | |
| **Genital System** | | | | | | |
| Ovary | (10) | (10) | (10) | (10) | (10) | (2) |
| Angiectasis | 1 (10%) | 1 (10%) | | | 2 (20%) | |
| Atrophy | | | 1 (10%) | 9 (90%) | 7 (70%) | 2 (100%) |
| Cyst | 1 (10%) | 2 (20%) | 2 (20%) | 2 (20%) | 3 (30%) | |
| Germinal epithelium, hyperplasia | | | | | 3 (30%) | 1 (50%) |
| Granulosa cell, hyperplasia | | | | | 1 (10%) | 1 (50%) |
| Uterus | (10) | (1) | (10) | (10) | (10) | (2) |
| Angiectasis | | | | 1 (10%) | | |
| Atrophy | | | | | | 2 (100%) |
| Hyperplasia, cystic | 9 (90%) | 1 (100%) | 10 (100%) | 8 (80%) | 6 (60%) | |
| Thrombosis | | | | | 1 (10%) | |

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***15-Month Interim Evaluation*** (continued) | | | | | | |
| **Hematopoietic System** | | | | | | |
| Bone marrow | (10) | | | (10) | (10) | (2) |
| Fibrosis | | | | | 1 (10%) | |
| Hyperplasia | | | | | 1 (10%) | 2 (100%) |
| Lymph node, mandibular | (8) | | | (6) | (5) | (1) |
| Hyperplasia | 1 (13%) | | | 1 (17%) | | |
| Lymph node, mesenteric | (10) | | | (10) | (9) | (2) |
| Hyperplasia | | | | | 1 (11%) | 1 (50%) |
| Spleen | (10) | | | (10) | (10) | (2) |
| Hematopoietic cell proliferation | | | | | 3 (30%) | 2 (100%) |
| Thymus | (10) | | | (10) | (9) | (2) |
| Hyperplasia, lymphoid | | | | | 1 (11%) | |
| Necrosis | | | | | 1 (11%) | |
| **Integumentary System** | | | | | | |
| Mammary gland | (10) | | | (10) | (10) | (2) |
| Galactocele | | | | | 1 (10%) | |
| Hyperplasia | | | | | 1 (10%) | |
| **Musculoskeletal System** | | | | | | |
| Bone | (10) | | | | (10) | (2) |
| Fibrous osteodystrophy | | | | | 1 (10%) | |
| Osteopetrosis | | | | | 1 (10%) | |
| Skeletal muscle | | | | | (1) | |
| Hemorrhage | | | | | 1 (100%) | |
| **Nervous System** | | | | | | |
| Brain | (10) | | | | (10) | (2) |
| Hemorrhage | | | | | | 1 (50%) |
| Mineralization | 1 (10%) | | | | 2 (20%) | |
| **Respiratory System** | | | | | | |
| Lung | (10) | (10) | (10) | (10) | (10) | (2) |
| Hemorrhage | | | | | | 1 (50%) |
| Inflammation, focal, chronic | | | | | 1 (10%) | |
| Alveolar epithelium, hyperplasia | | | 1 (10%) | 2 (20%) | 5 (50%) | 1 (50%) |
| Nose | (10) | | | | (10) | (2) |
| Inflammation, suppurative | 2 (20%) | | | | | |
| Olfactory epithelium, atrophy | 1 (10%) | | | | | |
| Respiratory epithelium, metaplasia, squamous | 1 (10%) | | | | | |
| Trachea | (10) | | | | (10) | (2) |
| Inflammation, suppurative | 1 (10%) | | | | | |
| **Special Senses System** | | | | | | |
| None | | | | | | |

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***15-Month Interim Evaluation*** (continued) | | | | | | |
| **Urinary System** | | | | | | |
| None | | | | | | |
| ***2-Year Study*** | | | | | | |
| **Alimentary System** | | | | | | |
| Esophagus | (41) | (41) | (47) | (45) | (48) | (79) |
| Acanthosis | 1 (2%) | | | | | |
| Gallbladder | (46) | (44) | (41) | (43) | (39) | (55) |
| Hyperplasia | 1 (2%) | | | 3 (7%) | | |
| Inflammation | 1 (2%) | | 1 (2%) | 2 (5%) | | 1 (2%) |
| Intestine large, cecum | (48) | (46) | (46) | (47) | (47) | (68) |
| Hemorrhage | | 1 (2%) | | | | |
| Intestine large, colon | (48) | (48) | (47) | (47) | (48) | (73) |
| Endothelium, hyperplasia | | | 1 (2%) | | | |
| Intestine small, ileum | (48) | (46) | (43) | (47) | (45) | (66) |
| Inflammation, chronic | | 1 (2%) | | | | |
| Peyer's patch, hyperplasia | | | | | 1 (2%) | |
| Intestine small, jejunum | (47) | (45) | (44) | (46) | (44) | (60) |
| Hemorrhage | | | | | | 2 (3%) |
| Liver | (49) | (49) | (50) | (50) | (50) | (80) |
| Angiectasis | | 5 (10%) | 1 (2%) | 3 (6%) | 1 (2%) | 1 (1%) |
| Basophilic focus | 1 (2%) | 1 (2%) | 1 (2%) | 2 (4%) | | 1 (1%) |
| Clear cell focus | 2 (4%) | 1 (2%) | | | | |
| Degeneration, fatty | | 2 (4%) | 1 (2%) | 4 (8%) | | |
| Eosinophilic focus | 5 (10%) | 11 (22%) | 18 (36%) | 11 (22%) | 5 (10%) | 2 (3%) |
| Hematopoietic cell proliferation | 3 (6%) | 6 (12%) | 1 (2%) | 11 (22%) | 14 (28%) | 10 (13%) |
| Infarct | | | 1 (2%) | | | |
| Inflammation, chronic | 1 (2%) | 1 (2%) | | | | 1 (1%) |
| Inflammation, granulomatous, focal | 1 (2%) | 1 (2%) | 1 (2%) | | | |
| Mixed cell focus | | 1 (2%) | | 1 (2%) | | 1 (1%) |
| Necrosis | 2 (4%) | 2 (4%) | 7 (14%) | 5 (10%) | 19 (38%) | 17 (21%) |
| Thrombosis | | | | | 1 (2%) | 1 (1%) |
| Biliary tract, cyst | 1 (2%) | | | 1 (2%) | 1 (2%) | 2 (3%) |
| Biliary tract, hyperplasia | | | | 1 (2%) | | |
| Centrilobular, degeneration, fatty | | | | 1 (2%) | 1 (2%) | 3 (4%) |
| Centrilobular, necrosis | | | | 1 (2%) | 4 (8%) | 7 (9%) |
| Mesentery | (12) | (13) | (14) | (9) | (12) | (6) |
| Fat, angiectasis | 3 (25%) | 3 (23%) | 4 (29%) | 3 (33%) | 1 (8%) | |
| Fat, ectopic tissue | | 1 (8%) | | | | |
| Fat, hemorrhage | 1 (8%) | | 1 (7%) | | 1 (8%) | |
| Fat, inflammation, chronic | 4 (33%) | 3 (23%) | 6 (43%) | 2 (22%) | 5 (42%) | 1 (17%) |
| Fat, necrosis | 8 (67%) | 6 (46%) | 5 (36%) | 3 (33%) | 6 (50%) | |
| Pancreas | (49) | (49) | (47) | (48) | (49) | (78) |
| Acinus, atrophy | 3 (6%) | 3 (6%) | 5 (11%) | | 2 (4%) | 1 (1%) |
| Acinus, focal cellular change | 3 (6%) | 5 (10%) | 3 (6%) | 3 (6%) | | |
| Acinus, hyperplasia | 1 (2%) | | 1 (2%) | | 1 (2%) | |
| Acinus, inflammation, chronic | 2 (4%) | | 3 (6%) | | | |
| Duct, cyst | 2 (4%) | | 2 (4%) | | | 1 (1%) |

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***2-Year Study*** (continued) | | | | | | |
| **Alimentary System** (continued) | | | | | | |
| Salivary glands | (50) | (49) | (50) | (49) | (50) | (79) |
| Atrophy, focal | | | | 1 (2%) | | |
| Inflammation | 3 (6%) | | | 4 (8%) | | |
| Inflammation, chronic | | | 1 (2%) | | | |
| Stomach, forestomach | (50) | (49) | (47) | (48) | (50) | (79) |
| Cyst epithelial inclusion | | 1 (2%) | | | | |
| Mineralization | | | 1 (2%) | | | |
| Ulcer | 2 (4%) | 2 (4%) | 1 (2%) | 3 (6%) | 5 (10%) | 11 (14%) |
| Epithelium, hyperplasia | 4 (8%) | 5 (10%) | 4 (9%) | 7 (15%) | 14 (28%) | 47 (59%) |
| Stomach, glandular | (49) | (48) | (48) | (48) | (48) | (76) |
| Hemorrhage | | 1 (2%) | | | | 2 (3%) |
| Inflammation, suppurative | | 1 (2%) | | | | |
| Mineralization | | | | 1 (2%) | | |
| Pigmentation, hemosiderin | 2 (4%) | 2 (4%) | 1 (2%) | 2 (4%) | 5 (10%) | 4 (5%) |
| Ulcer | 2 (4%) | 1 (2%) | 1 (2%) | 2 (4%) | 6 (13%) | 2 (3%) |
| Epithelium, hyperplasia | | | | | | 1 (1%) |
| Tooth | (4) | (5) | (1) | | | |
| Developmental malformation | 1 (25%) | | | | | |
| Inflammation | 3 (75%) | 4 (80%) | 1 (100%) | | | |
| **Cardiovascular System** | | | | | | |
| Blood vessel | (1) | (1) | | (1) | | (1) |
| Inflammation | 1 (100%) | 1 (100%) | | | | |
| Mineralization | | | | 1 (100%) | | |
| Heart | (50) | (50) | (50) | (49) | (50) | (80) |
| Cardiomyopathy | 4 (8%) | 2 (4%) | 1 (2%) | 4 (8%) | | 2 (3%) |
| Infiltration cellular, mixed cell | | | | | 1 (2%) | |
| Mineralization | | 2 (4%) | | 2 (4%) | 2 (4%) | 11 (14%) |
| Necrosis | | | | 2 (4%) | 1 (2%) | 3 (4%) |
| Atrium, thrombosis | | | | | | 2 (3%) |
| Endothelium, hyperplasia | | 2 (4%) | 1 (2%) | 4 (8%) | 5 (10%) | 8 (10%) |
| Pericardium, inflammation, chronic | | | | 1 (2%) | | |
| Pericardium, fat, necrosis | | | | 1 (2%) | | |
| Perivascular, inflammation | 1 (2%) | 1 (2%) | 1 (2%) | 1 (2%) | | |
| **Endocrine System** | | | | | | |
| Adrenal gland, cortex | (50) | (49) | (48) | (49) | (50) | (78) |
| Cyst | | | 1 (2%) | 4 (8%) | 1 (2%) | |
| Focal cellular change | | 3 (6%) | | | | |
| Hematocyst | | | | | 1 (2%) | |
| Hematopoietic cell proliferation | 1 (2%) | | 1 (2%) | 4 (8%) | 5 (10%) | 2 (3%) |
| Hemorrhage | | | | | | 1 (1%) |
| Hyperplasia | 3 (6%) | | | 2 (4%) | 1 (2%) | 1 (1%) |
| Hypertrophy | 1 (2%) | 3 (6%) | 1 (2%) | 3 (6%) | 2 (4%) | |
| Capsule, hyperplasia | | 2 (4%) | | | | |

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***2-Year Study*** (continued) | | | | | | |
| **Endocrine System** (continued) | | | | | | |
| Adrenal gland, medulla | (50) | (48) | (47) | (45) | (50) | (76) |
| Cyst | | | | 1 (2%) | | |
| Hematopoietic cell proliferation | | | | | | 1 (1%) |
| Hyperplasia | 3 (6%) | 1 (2%) | 1 (2%) | 2 (4%) | | |
| Islets, pancreatic | (49) | (49) | (46) | (47) | (49) | (78) |
| Hyperplasia | 2 (4%) | | 2 (4%) | | | |
| Parathyroid gland | (40) | (40) | (33) | (39) | (38) | (69) |
| Cyst | | 1 (3%) | | | | 1 (1%) |
| Pituitary gland | (50) | (49) | (48) | (47) | (48) | (71) |
| Pars distalis, angiectasis | 1 (2%) | 2 (4%) | 3 (6%) | 1 (2%) | | |
| Pars distalis, cyst | | 1 (2%) | 1 (2%) | | 1 (2%) | 2 (3%) |
| Pars distalis, hemorrhage | | 1 (2%) | | | | |
| Pars distalis, hyperplasia | 13 (26%) | 19 (39%) | 10 (21%) | 9 (19%) | | |
| Pars intermedia, hyperplasia | | 2 (4%) | 1 (2%) | | | |
| Thyroid gland | (50) | (49) | (49) | (49) | (49) | (78) |
| Cyst | 1 (2%) | 6 (12%) | 1 (2%) | 4 (8%) | 1 (2%) | |
| Inflammation | 2 (4%) | | 2 (4%) | 2 (4%) | | |
| C-cell, hyperplasia | | | | 1 (2%) | | |
| Follicular cell, hyperplasia | 11 (22%) | 10 (20%) | 13 (27%) | 6 (12%) | 1 (2%) | 1 (1%) |
| **General Body System** | | | | | | |
| None | | | | | | |
| **Genital System** | | | | | | |
| Ovary | (49) | (49) | (48) | (50) | (50) | (79) |
| Angiectasis | 4 (8%) | 6 (12%) | 3 (6%) | 13 (26%) | 14 (28%) | 17 (22%) |
| Atrophy | 4 (8%) | 19 (39%) | 32 (67%) | 42 (84%) | 43 (86%) | 69 (87%) |
| Cyst | 14 (29%) | 27 (55%) | 19 (40%) | 17 (34%) | 9 (18%) | 13 (16%) |
| Metaplasia, osseous | | 1 (2%) | | | | |
| Mineralization | | 1 (2%) | | | | |
| Corpus luteum, hyperplasia | | 1 (2%) | | | | |
| Germinal epithelium, hyperplasia | 2 (4%) | 3 (6%) | 8 (17%) | 15 (30%) | 14 (28%) | 18 (23%) |
| Granulosa cell, hyperplasia | 1 (2%) | | 2 (4%) | 3 (6%) | 4 (8%) | 2 (3%) |
| Uterus | (50) | (49) | (50) | (49) | (50) | (78) |
| Angiectasis | 3 (6%) | 8 (16%) | 10 (20%) | 5 (10%) | 2 (4%) | |
| Atrophy | 1 (2%) | | 1 (2%) | 1 (2%) | 8 (16%) | 41 (53%) |
| Cyst | 1 (2%) | | | 1 (2%) | | 1 (1%) |
| Dilatation | 2 (4%) | 2 (4%) | | | | |
| Hemorrhage | | 1 (2%) | 2 (4%) | 1 (2%) | | |
| Hyperplasia, cystic | 46 (92%) | 47 (96%) | 40 (80%) | 40 (82%) | 18 (36%) | |
| Hyperplasia, histiocytic | | | | | | 1 (1%) |
| Inflammation | 1 (2%) | 1 (2%) | | | | |
| Thrombosis | | | | 1 (2%) | | |
| Arteriole, hypertrophy | 1 (2%) | 1 (2%) | | | | |
| Cervix, cyst | | 1 (2%) | | | | |
| Muscularis, hyperplasia | | 1 (2%) | | | 1 (2%) | |

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***2-Year Study*** (continued) | | | | | | |
| **Hematopoietic System** | | | | | | |
| Bone marrow | (50) | (49) | (48) | (49) | (50) | (79) |
| Angiectasis | | | | 1 (2%) | | |
| Atrophy | | | | | | 11 (14%) |
| Fibrosis | | | 1 (2%) | 1 (2%) | | |
| Hyperplasia | 4 (8%) | 5 (10%) | 9 (19%) | 18 (37%) | 17 (34%) | 18 (23%) |
| Necrosis | | | | | | 2 (3%) |
| Lymph node | (50) | (50) | (50) | (50) | (49) | (79) |
| Iliac, hyperplasia | | | 1 (2%) | | | |
| Pancreatic, hyperplasia | | 1 (2%) | | | | |
| Renal, hyperplasia | | 1 (2%) | | | 1 (2%) | |
| Lymph node, bronchial | (43) | (42) | (42) | (38) | (34) | (54) |
| Congestion | | 1 (2%) | | | 1 (3%) | 2 (4%) |
| Hematopoietic cell proliferation | 1 (2%) | | | 1 (3%) | 2 (6%) | |
| Hyperplasia | 9 (21%) | 10 (24%) | 6 (14%) | 1 (3%) | 1 (3%) | |
| Inflammation | | | | 1 (3%) | | |
| Lymph node, mandibular | (39) | (42) | (46) | (43) | (39) | (58) |
| Congestion | 1 (3%) | | | | | |
| Hematopoietic cell proliferation | 2 (5%) | | | 3 (7%) | 2 (5%) | |
| Hyperplasia | 7 (18%) | 5 (12%) | 3 (7%) | 4 (9%) | 1 (3%) | |
| Hyperplasia, histiocytic | | | | | | 3 (5%) |
| Hyperplasia, plasma cell | | | | | | 1 (2%) |
| Necrosis | | | | | | 1 (2%) |
| Lymph node, mediastinal | (30) | (29) | (33) | (36) | (40) | (67) |
| Angiectasis | | 1 (3%) | | | | |
| Congestion | | 1 (3%) | | | 1 (3%) | 4 (6%) |
| Hematopoietic cell proliferation | 2 (7%) | | | 3 (8%) | 2 (5%) | 1 (1%) |
| Hyperplasia | 6 (20%) | 1 (3%) | 2 (6%) | 3 (8%) | 3 (8%) | 1 (1%) |
| Lymph node, mesenteric | (49) | (46) | (48) | (48) | (47) | (71) |
| Angiectasis | 3 (6%) | 2 (4%) | 3 (6%) | 4 (8%) | 1 (2%) | |
| Congestion | | 1 (2%) | 1 (2%) | | | 1 (1%) |
| Hematopoietic cell proliferation | 2 (4%) | 1 (2%) | 2 (4%) | 3 (6%) | 2 (4%) | |
| Hemorrhage | | 1 (2%) | | | | 1 (1%) |
| Hyperplasia | 9 (18%) | 17 (37%) | 7 (15%) | 6 (13%) | 1 (2%) | |
| Hyperplasia, histiocytic | 1 (2%) | | | | | 1 (1%) |
| Inflammation | | | | | | 1 (1%) |
| Inflammation, granulomatous | | | | | 2 (4%) | |
| Necrosis | | | | | | 1 (1%) |
| Spleen | (49) | (49) | (48) | (48) | (50) | (78) |
| Angiectasis | | | 1 (2%) | | 1 (2%) | |
| Depletion lymphoid | | | | | | 1 (1%) |
| Hematopoietic cell proliferation | 27 (55%) | 25 (51%) | 24 (50%) | 29 (60%) | 25 (50%) | 26 (33%) |
| Hemorrhage | | | 1 (2%) | | | |
| Hyperplasia, histiocytic | 1 (2%) | | | | | 1 (1%) |
| Hyperplasia, lymphoid | 2 (4%) | 3 (6%) | 2 (4%) | 1 (2%) | | |
| Inflammation, granulomatous, focal | | 1 (2%) | | | | |
| Necrosis | | | | | 1 (2%) | |
| Capsule, inflammation, chronic | | | 2 (4%) | | 1 (2%) | |

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***2-Year Study*** (continued) | | | | | | |
| **Hematopoietic System** (continued) | | | | | | |
| Thymus | (46) | (46) | (45) | (41) | (40) | (71) |
| Angiectasis | | 2 (4%) | 1 (2%) | | | |
| Hyperplasia, lymphoid | 8 (17%) | 14 (30%) | 3 (7%) | 2 (5%) | | |
| Infiltration cellular, mixed cell | | | | 1 (2%) | 1 (3%) | |
| Necrosis | 1 (2%) | 6 (13%) | 6 (13%) | 16 (39%) | 21 (53%) | 23 (32%) |
| **Integumentary System** | | | | | | |
| Mammary gland | (49) | (46) | (49) | (50) | (47) | (77) |
| Galactocele | 1 (2%) | | 1 (2%) | 1 (2%) | | |
| Hyperplasia | 2 (4%) | | 2 (4%) | 4 (8%) | 7 (15%) | 2 (3%) |
| Skin | (50) | (50) | (50) | (50) | (50) | (79) |
| Acanthosis | | 1 (2%) | | | | |
| Cyst epithelial inclusion | | | 1 (2%) | | | |
| Inflammation, chronic | 1 (2%) | 1 (2%) | | | 2 (4%) | |
| Necrosis | | | 1 (2%) | | 1 (2%) | |
| Hair follicle, atrophy | | | 2 (4%) | 3 (6%) | | |
| Subcutaneous tissue, edema | | 1 (2%) | | | | |
| Subcutaneous tissue, hemorrhage | | | 2 (4%) | 1 (2%) | 1 (2%) | 1 (1%) |
| Subcutaneous tissue, inflammation, granulomatous | | | | | 1 (2%) | |
| **Musculoskeletal System** | | | | | | |
| Bone | (50) | (50) | (50) | (50) | (50) | (80) |
| Developmental malformation | 1 (2%) | | | | | |
| Fibrous osteodystrophy | 38 (76%) | 36 (72%) | 29 (58%) | 22 (44%) | 11 (22%) | |
| Osteopetrosis | | 1 (2%) | | | | |
| Periosteum, hemorrhage | | | | | | 1 (1%) |
| Skeletal muscle | (1) | | (1) | (1) | (1) | (2) |
| Hemorrhage | | | | | | 1 (50%) |
| **Nervous System** | | | | | | |
| Brain | (50) | (50) | (50) | (50) | (50) | (80) |
| Compression | 1 (2%) | | 1 (2%) | | | |
| Hemorrhage | | | 3 (6%) | 3 (6%) | 2 (4%) | 5 (6%) |
| Infiltration cellular, mixed cell | | | | | | 1 (1%) |
| Mineralization | 23 (46%) | 24 (48%) | 17 (34%) | 14 (28%) | 5 (10%) | 11 (14%) |
| Necrosis | | | | | 1 (2%) | |
| Thrombosis | | | | | | 1 (1%) |
| Perivascular, infiltration cellular, lymphocyte | | 3 (6%) | | | | |
| Ventricle, cyst epithelial inclusion | | | | | | 1 (1%) |
| **Respiratory System** | | | | | | |
| Larynx | (50) | (50) | (49) | (47) | (49) | (72) |
| Inflammation | | | | 1 (2%) | | 1 (1%) |
| Inflammation, suppurative | 1 (2%) | 1 (2%) | | | | |

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***2-Year Study*** (continued) | | | | | | |
| **Respiratory System** (continued) | | | | | | |
| Lung | (50) | (50) | (50) | (50) | (50) | (78) |
| Hemorrhage | 3 (6%) | 4 (8%) | 6 (12%) | 5 (10%) | 10 (20%) | 12 (15%) |
| Hyperplasia, lymphoid | 1 (2%) | 1 (2%) | | | | |
| Infiltration cellular, mixed cell | | | 1 (2%) | | 2 (4%) | 3 (4%) |
| Inflammation, chronic, diffuse | | | | | 1 (2%) | |
| Inflammation, chronic, focal | 3 (6%) | 2 (4%) | | 1 (2%) | | |
| Inflammation, focal, chronic | | | | | 1 (2%) | |
| Inflammation, granulomatous, focal | | | | 1 (2%) | | |
| Inflammation, suppurative | | 1 (2%) | | 1 (2%) | 1 (2%) | |
| Thrombosis | | | 1 (2%) | | | 1 (1%) |
| Alveolar epithelium, hyperplasia | 5 (10%) | 5 (10%) | 3 (6%) | 9 (18%) | 11 (22%) | 11 (14%) |
| Alveolus, infiltration cellular, histiocyte | 1 (2%) | 3 (6%) | 7 (14%) | 7 (14%) | 10 (20%) | 3 (4%) |
| Alveolus, pigmentation, hemosiderin | 1 (2%) | | 2 (4%) | 2 (4%) | 1 (2%) | |
| Fat, mediastinum, inflammation, chronic | 1 (2%) | | | | | |
| Fat, mediastinum, necrosis | 1 (2%) | | 1 (2%) | | | |
| Mediastinum, hyperplasia, lymphoid | 1 (2%) | | | | | |
| Peribronchiolar, inflammation, pyogranulomatous | | | | | | 1 (1%) |
| Nose | (50) | (49) | (48) | (50) | (50) | (79) |
| Inflammation, suppurative | 17 (34%) | 12 (24%) | 13 (27%) | 11 (22%) | 7 (14%) | 1 (1%) |
| Nasolacrimal duct, inflammation, suppurative | 2 (4%) | 1 (2%) | 6 (13%) | 4 (8%) | 1 (2%) | |
| Olfactory epithelium, atrophy | 1 (2%) | | | | | 7 (9%) |
| Olfactory epithelium, inflammation, chronic | | | | | | 1 (1%) |
| Respiratory epithelium, hyperplasia | | | | | 1 (2%) | |
| Respiratory epithelium, metaplasia, squamous | | | | | 2 (4%) | |
| Trachea | (50) | (50) | (48) | (49) | (50) | (73) |
| Inflammation, suppurative | 12 (24%) | 17 (34%) | 14 (29%) | 10 (20%) | 8 (16%) | |
| Metaplasia, squamous | | | | | 1 (2%) | |
| **Special Senses System** | | | | | | |
| Eye | (2) | | (2) | (2) | (3) | (3) |
| Degeneration | 2 (100%) | | 1 (50%) | | | |
| Cornea, hyperplasia | | | | 1 (50%) | 1 (33%) | |
| Cornea, inflammation, chronic | | | 1 (50%) | 1 (50%) | 2 (67%) | |
| Lens, degeneration | | | | 2 (100%) | | |
| Harderian gland | (50) | (49) | (48) | (49) | (49) | (66) |
| Hyperplasia | 1 (2%) | 5 (10%) | 9 (19%) | 4 (8%) | 4 (8%) | 7 (11%) |
| Inflammation, chronic | 1 (2%) | | 1 (2%) | | | 1 (2%) |
| **Urinary System** | | | | | | |
| Kidney | (49) | (49) | (48) | (50) | (50) | (80) |
| Amyloid deposition | | | | | 1 (2%) | |
| Glomerulosclerosis | | | | | | 1 (1%) |
| Hematopoietic cell proliferation | | 1 (2%) | | | 2 (4%) | |
| Hydronephrosis | 2 (4%) | | | 2 (4%) | 2 (4%) | |
| Infarct | | | | | 1 (2%) | |
| Infiltration cellular, lymphocyte | 1 (2%) | 1 (2%) | | | | |
| Inflammation, suppurative | 1 (2%) | | | | 1 (2%) | |

**TABLE B5**
**Summary of the Incidence of Nonneoplastic Lesions in Female Mice at the 9- and 15-Month Interim Evaluations and in the 2-Year Inhalation Study of 1,3-Butadiene** (continued)

| | 0 ppm | 6.25 ppm | 20 ppm | 62.5 ppm | 200 ppm | 625 ppm |
|---|---|---|---|---|---|---|
| ***2-Year Study*** (continued) | | | | | | |
| **Urinary System** (continued) | | | | | | |
| Kidney (continued) | (49) | (49) | (48) | (50) | (50) | (80) |
| Metaplasia, osseous | 1 (2%) | 1 (2%) | 2 (4%) | | 2 (4%) | 1 (1%) |
| Nephropathy | 11 (22%) | 3 (6%) | 3 (6%) | 6 (12%) | 1 (2%) | |
| Pigmentation, hemosiderin | | | | 2 (4%) | | |
| Thrombosis | | | | | | 1 (1%) |
| Capsule, inflammation, chronic | | | | | 1 (2%) | |
| Medulla, congestion | | | | | 1 (2%) | |
| Renal tubule, degeneration | | | | 1 (2%) | | |
| Renal tubule, hyperplasia | | | | 1 (2%) | | |
| Renal tubule, mineralization | | | | 1 (2%) | | |
| Urinary bladder | (47) | (46) | (48) | (46) | (49) | (75) |
| Hemorrhage | | | | | | 3 (4%) |
| Hyperplasia, histiocytic | | | | | | 1 (1%) |
| Inflammation | 2 (4%) | 1 (2%) | | | | |
| Transitional epithelium, hyperplasia | 1 (2%) | | | | | |

[a] Number of animals examined microscopically at site and number of animals with lesion

# APPENDIX C
# SUMMARY OF LESIONS IN MALE MICE IN THE STOP-EXPOSURE INHALATION STUDY OF 1,3-BUTADIENE


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TABLE C1
**Summary of the Incidence of Neoplasms in Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene[a]**

| | 200 ppm (40 weeks) | 312 ppm (52 weeks) | 625 ppm (13 weeks) | 625 ppm (26 weeks) |
|---|---|---|---|---|
| **Disposition Summary** | | | | |
| Animals initially in study | 50 | 50 | 50 | 50 |
| Early deaths | | | | |
| Accidental deaths | | | 1 | |
| Moribund | 29 | 25 | 25 | 22 |
| Natural deaths | 12 | 24 | 19 | 28 |
| Survivors | | | | |
| Terminal sacrifice | 9 | 1 | 5 | |
| Animals examined microscopically | 50 | 50 | 50 | 50 |
| **Alimentary System** | | | | |
| Gallbladder | (40) | (27) | (32) | (32) |
| Lymphoma malignant lymphocytic | | | 1 (3%) | 3 (9%) |
| Intestine large, cecum | (42) | (41) | (39) | (42) |
| Histiocytic sarcoma | | | | 1 (2%) |
| Lymphoma malignant lymphocytic | | | | 2 (5%) |
| Intestine large, colon | (44) | (44) | (44) | (45) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | |
| Intestine small, duodenum | (42) | (38) | (35) | (32) |
| Lymphoma malignant lymphocytic | | | 2 (6%) | |
| Lymphoma malignant mixed | 1 (2%) | | 2 (6%) | |
| Intestine small, ileum | (44) | (40) | (37) | (40) |
| Histiocytic sarcoma | 1 (2%) | 1 (3%) | | 1 (3%) |
| Lymphoma malignant lymphocytic | | 1 (3%) | | 2 (5%) |
| Lymphoma malignant mixed | | 1 (3%) | 2 (5%) | |
| Intestine small, jejunum | (43) | (37) | (40) | (41) |
| Carcinoma | | | 1 (3%) | |
| Hemangiosarcoma, metastatic, heart | | 1 (3%) | | |
| Histiocytic sarcoma | | 1 (3%) | 1 (3%) | 1 (2%) |
| Lymphoma malignant lymphocytic | 1 (2%) | | | 1 (2%) |
| Liver | (49) | (50) | (49) | (50) |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | 1 (2%) | | |
| Hemangioma | 1 (2%) | | | |
| Hemangiosarcoma | | 1 (2%) | 2 (4%) | 1 (2%) |
| Hemangiosarcoma, metastatic, heart | 4 (8%) | 18 (36%) | 2 (4%) | 5 (10%) |
| Hepatoblastoma | | 1 (2%) | | |
| Hepatocellular carcinoma | 9 (18%) | 8 (16%) | 7 (14%) | 3 (6%) |
| Hepatocellular carcinoma, multiple | 5 (10%) | 2 (4%) | 7 (14%) | 1 (2%) |
| Hepatocellular adenoma | 15 (31%) | 10 (20%) | 14 (29%) | 7 (14%) |
| Hepatocellular adenoma, multiple | 12 (24%) | 9 (18%) | 5 (10%) | 4 (8%) |
| Histiocytic sarcoma | 4 (8%) | 5 (10%) | 2 (4%) | 2 (4%) |
| Lymphoma malignant lymphocytic | 2 (4%) | 2 (4%) | 11 (22%) | 25 (50%) |
| Lymphoma malignant mixed | | | 2 (4%) | 2 (4%) |
| Mast cell tumor NOS, metastatic, bone marrow | 2 (4%) | 1 (2%) | | 1 (2%) |
| Squamous cell carcinoma, metastatic, stomach | | 3 (6%) | | 1 (2%) |

TABLE C1
Summary of the Incidence of Neoplasms in Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene (continued)

| | 200 ppm (40 weeks) | 312 ppm (52 weeks) | 625 ppm (13 weeks) | 625 ppm (26 weeks) |
|---|---|---|---|---|
| **Alimentary System (continued)** | | | | |
| Mesentery | (13) | (13) | (11) | (4) |
| Adenocarcinoma, metastatic, pancreas | | 1 (8%) | | |
| Fat: hemangioma | 2 (15%) | | 2 (18%) | |
| Fat: hemangioma, multiple | 1 (8%) | | | |
| Fat: hemangiosarcoma | 1 (8%) | | 1 (9%) | |
| Fat: hemangiosarcoma, metastatic, heart | 2 (15%) | 7 (54%) | | |
| Fat: histiocytic sarcoma | | | | 1 (25%) |
| Fat: lymphoma malignant lymphocytic | | | 1 (9%) | |
| Fat: mast cell tumor NOS, metastatic, bone marrow | 2 (15%) | | | |
| Fat: squamous cell carcinoma, metastatic, stomach | | 2 (15%) | 2 (18%) | 1 (25%) |
| Pancreas | (46) | (49) | (46) | (49) |
| Acinus, adenocarcinoma | | 1 (2%) | | |
| Acinus, hemangiosarcoma, metastatic, heart | | 1 (2%) | | |
| Acinus, hemangiosarcoma, metastatic, liver | | | | 1 (2%) |
| Acinus, histiocytic sarcoma | 2 (4%) | 1 (2%) | 1 (2%) | 1 (2%) |
| Acinus, lymphoma malignant lymphocytic | 1 (2%) | 1 (2%) | 5 (11%) | 13 (27%) |
| Acinus, lymphoma malignant mixed | | | 1 (2%) | |
| Acinus, squamous cell carcinoma, metastatic, stomach | | 1 (2%) | | 1 (2%) |
| Pharynx | (1) | | | (2) |
| Carcinoma, metastatic, Zymbal's gland | | | | 1 (50%) |
| Squamous cell carcinoma | | | | 1 (50%) |
| Palate, mast cell tumor NOS, metastatic, bone marrow | 1 (100%) | | | |
| Salivary glands | (48) | (48) | (50) | (50) |
| Lymphoma malignant lymphocytic | | | 2 (4%) | 10 (20%) |
| Stomach, forestomach | (48) | (48) | (50) | (50) |
| Lymphoma malignant lymphocytic | | | 1 (2%) | 2 (4%) |
| Mast cell tumor NOS, metastatic, bone marrow | 3 (6%) | | | 1 (2%) |
| Squamous cell carcinoma | | 5 (10%) | 4 (8%) | 6 (12%) |
| Squamous cell papilloma | 2 (4%) | 4 (8%) | 3 (6%) | 4 (8%) |
| Squamous cell papilloma, multiple | 1 (2%) | | 1 (2%) | |
| Stomach, glandular | (44) | (47) | (44) | (47) |
| Histiocytic sarcoma | | | | 1 (2%) |
| Lymphoma malignant lymphocytic | | | 1 (2%) | 7 (15%) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | |
| Squamous cell carcinoma, metastatic, stomach | | 1 (2%) | 1 (2%) | 1 (2%) |
| **Cardiovascular System** | | | | |
| Heart | (50) | (50) | (50) | (50) |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | 1 (2%) | |
| Carcinoma, metastatic, Zymbal's gland | | | | 1 (2%) |
| Hemangiosarcoma | 15 (30%) | 33 (66%) | 7 (14%) | 13 (26%) |
| Histiocytic sarcoma | | 1 (2%) | | 1 (2%) |
| Lymphoma malignant lymphocytic | 4 (8%) | | 8 (16%) | 12 (24%) |
| Lymphoma malignant mixed | | | | 1 (2%) |

TABLE C1
**Summary of the Incidence of Neoplasms in Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene** (continued)

| | 200 ppm (40 weeks) | 312 ppm (52 weeks) | 625 ppm (13 weeks) | 625 ppm (26 weeks) |
|---|---|---|---|---|
| **Endocrine System** | | | | |
| Adrenal gland, cortex | (45) | (49) | (50) | (50) |
| Adenocarcinoma, metastatic, pancreas | | 1 (2%) | | |
| Adenoma | 1 (2%) | | | |
| Alveolar/bronchiolar carcinoma, metastatic, lung | 1 (2%) | | | |
| Lymphoma malignant lymphocytic | | | 2 (4%) | 4 (8%) |
| Lymphoma malignant mixed | | | 1 (2%) | 1 (2%) |
| Bilateral, adenoma | | | 1 (2%) | |
| Adrenal gland, medulla | (45) | (48) | (49) | (48) |
| Adenocarcinoma, metastatic, pancreas | | 1 (2%) | | |
| Histiocytic sarcoma | | | | 1 (2%) |
| Lymphoma malignant lymphocytic | | | | 1 (2%) |
| Pheochromocytoma benign | | 1 (2%) | 2 (4%) | |
| Islets, pancreatic | (46) | (49) | (45) | (48) |
| Adenoma | 1 (2%) | 1 (2%) | | |
| Pituitary gland | (44) | (43) | (43) | (43) |
| Carcinoma, metastatic, Zymbal's gland | | | | 1 (2%) |
| Lymphoma malignant lymphocytic | | | 3 (7%) | 4 (9%) |
| Pars intermedia, adenoma | 1 (2%) | | | |
| Thyroid gland | (48) | (49) | (50) | (49) |
| Lymphoma malignant lymphocytic | | | | 3 (6%) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | |
| Follicular cell, adenoma | 2 (4%) | 1 (2%) | 2 (4%) | |
| **General Body System** | | | | |
| None | | | | |
| **Genital System** | | | | |
| Epididymis | (49) | (50) | (49) | (50) |
| Adenocarcinoma, metastatic, pancreas | | 1 (2%) | | |
| Hemangiosarcoma, metastatic, heart | 1 (2%) | | | |
| Lymphoma malignant lymphocytic | | | | 3 (6%) |
| Lymphoma malignant mixed | | | | 1 (2%) |
| Preputial gland | (8) | (4) | (10) | (6) |
| Adenoma | | | 1 (10%) | |
| Carcinoma | | 3 (75%) | 3 (30%) | 2 (33%) |
| Bilateral, carcinoma | 1 (13%) | 1 (25%) | 1 (10%) | 1 (17%) |
| Prostate | (44) | (48) | (48) | (47) |
| Lymphoma malignant lymphocytic | | | 1 (2%) | 5 (11%) |
| Seminal vesicle | (44) | (47) | (42) | (47) |
| Hemangiosarcoma, metastatic, liver | | | | 1 (2%) |
| Lymphoma malignant lymphocytic | 1 (2%) | | | 2 (4%) |
| Testes | (50) | (50) | (50) | (50) |
| Hemangioma | | | 1 (2%) | |
| Lymphoma malignant lymphocytic | | | | 1 (2%) |

**Table C1**
**Summary of the Incidence of Neoplasms in Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene** (continued)

| | 200 ppm (40 weeks) | 312 ppm (52 weeks) | 625 ppm (13 weeks) | 625 ppm (26 weeks) |
|---|---|---|---|---|
| **Hematopoietic System** | | | | |
| Bone marrow | (50) | (49) | (48) | (49) |
| Histiocytic sarcoma | 3 (6%) | 2 (4%) | 1 (2%) | 1 (2%) |
| Lymphoma malignant lymphocytic | 4 (8%) | 2 (4%) | 17 (35%) | 27 (55%) |
| Lymphoma malignant mixed | | | 1 (2%) | 2 (4%) |
| Mast cell tumor NOS | 3 (6%) | 1 (2%) | | 1 (2%) |
| Lymph node | (50) | (50) | (49) | (50) |
| Lymphoma malignant lymphocytic | | | | 1 (2%) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | |
| Axillary, hemangiosarcoma, metastatic, heart | | 1 (2%) | | |
| Axillary, lymphoma malignant lymphocytic | | 1 (2%) | 6 (12%) | 7 (14%) |
| Axillary, lymphoma malignant | | 1 (2%) | | |
| Axillary, lymphoma malignant mixed | | | 1 (2%) | 1 (2%) |
| Deep cervical, lymphoma malignant lymphocytic | | | 1 (2%) | |
| Iliac, lymphoma malignant lymphocytic | | 1 (2%) | 3 (6%) | 4 (8%) |
| Inguinal, lymphoma malignant lymphocytic | | | 3 (6%) | 4 (8%) |
| Inguinal, lymphoma malignant | | 1 (2%) | | |
| Inguinal, squamous cell carcinoma, metastatic, stomach | | | | 1 (2%) |
| Pancreatic, lymphoma malignant lymphocytic | | | | 1 (2%) |
| Renal, histiocytic sarcoma | | 1 (2%) | 1 (2%) | |
| Renal, lymphoma malignant lymphocytic | 3 (6%) | | 3 (6%) | 7 (14%) |
| Renal, lymphoma malignant mixed | | | 1 (2%) | |
| Renal, squamous cell carcinoma, metastatic, stomach | | 1 (2%) | | |
| Lymph node, bronchial | (43) | (37) | (40) | (41) |
| Adenocarcinoma, metastatic, lung | | 1 (3%) | | |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | 1 (3%) | 1 (2%) |
| Hemangiosarcoma, metastatic, heart | | 1 (3%) | | 1 (2%) |
| Histiocytic sarcoma | 2 (5%) | 3 (8%) | 1 (3%) | 1 (2%) |
| Lymphoma malignant lymphocytic | 5 (12%) | 3 (8%) | 13 (33%) | 26 (63%) |
| Lymphoma malignant mixed | | | 1 (3%) | 2 (5%) |
| Squamous cell carcinoma, metastatic, stomach | | 1 (3%) | | |
| Lymph node, mandibular | (42) | (31) | (39) | (43) |
| Histiocytic sarcoma | 2 (5%) | | | 2 (5%) |
| Lymphoma malignant lymphocytic | | 2 (6%) | 11 (28%) | 24 (56%) |
| Lymphoma malignant | | 1 (3%) | | |
| Lymphoma malignant mixed | | | 2 (5%) | 2 (5%) |
| Mast cell tumor NOS, metastatic, bone marrow | 2 (5%) | | | 1 (2%) |
| Squamous cell carcinoma, metastatic, pharynx | | | | 1 (2%) |
| Lymph node, mediastinal | (39) | (41) | (39) | (44) |
| Adenocarcinoma, metastatic, lung | | 1 (2%) | | |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | 1 (3%) | 1 (2%) |
| Hemangiosarcoma, metastatic, heart | 1 (3%) | | | |
| Histiocytic sarcoma | 1 (3%) | 4 (10%) | 1 (3%) | 1 (2%) |
| Lymphoma malignant lymphocytic | 6 (15%) | 2 (5%) | 13 (33%) | 27 (61%) |
| Lymphoma malignant | 1 (3%) | | | |
| Lymphoma malignant mixed | | | 3 (8%) | 2 (5%) |

TABLE C1
**Summary of the Incidence of Neoplasms in Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene** (continued)

| | 200 ppm (40 weeks) | 312 ppm (52 weeks) | 625 ppm (13 weeks) | 625 ppm (26 weeks) |
|---|---|---|---|---|
| **Hematopoietic System** (continued) | | | | |
| Lymph node, mediastinal (continued) | (39) | (41) | (39) | (44) |
| Mast cell tumor NOS, metastatic, bone marrow | 2 (5%) | | | |
| Squamous cell carcinoma, metastatic, stomach | | 2 (5%) | 2 (5%) | 2 (5%) |
| Lymph node, mesenteric | (44) | (44) | (43) | (48) |
| Hemangiosarcoma, metastatic, heart | 1 (2%) | 1 (2%) | | |
| Histiocytic sarcoma | 4 (9%) | 6 (14%) | 2 (5%) | 1 (2%) |
| Lymphoma malignant lymphocytic | 2 (5%) | 4 (9%) | 12 (28%) | 26 (54%) |
| Lymphoma malignant | 1 (2%) | 1 (2%) | | |
| Lymphoma malignant mixed | 1 (2%) | 2 (5%) | 4 (9%) | 3 (6%) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | |
| Squamous cell carcinoma, metastatic, stomach | | 3 (7%) | 1 (2%) | |
| Spleen | (47) | (48) | (49) | (50) |
| Hemangiosarcoma | | | 1 (2%) | |
| Hemangiosarcoma, metastatic, heart | 1 (2%) | 3 (6%) | | |
| Histiocytic sarcoma | 4 (9%) | 4 (8%) | 2 (4%) | 2 (4%) |
| Lymphoma malignant lymphocytic | 3 (6%) | 3 (6%) | 13 (27%) | 27 (54%) |
| Lymphoma malignant mixed | | 2 (4%) | 2 (4%) | 2 (4%) |
| Mast cell tumor NOS, metastatic, bone marrow | 2 (4%) | 1 (2%) | | 1 (2%) |
| Osteosarcoma, metastatic, uncertain primary site | | | | 1 (2%) |
| Squamous cell carcinoma, metastatic, stomach | | | | 1 (2%) |
| Thymus | (41) | (37) | (37) | (40) |
| Histiocytic sarcoma | 1 (2%) | 1 (3%) | 1 (3%) | |
| Lymphoma malignant lymphocytic | 5 (12%) | 2 (5%) | 15 (41%) | 26 (65%) |
| Lymphoma malignant | 1 (2%) | | | |
| Lymphoma malignant mixed | | | 2 (5%) | 1 (3%) |
| Mast cell tumor NOS, metastatic, bone marrow | 2 (5%) | | | |
| **Integumentary System** | | | | |
| Skin | (50) | (49) | (50) | (50) |
| Lymphoma malignant lymphocytic | | | | 1 (2%) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | |
| Sebaceous gland, adenoma | | 2 (4%) | 2 (4%) | |
| Subcutaneous tissue, hemangioma | 1 (2%) | | | |
| Subcutaneous tissue, hemangiosarcoma | 1 (2%) | | 1 (2%) | |
| Subcutaneous tissue, hemangiosarcoma, metastatic, heart | 2 (4%) | 4 (8%) | | |
| Subcutaneous tissue, leiomyosarcoma | | | | 1 (2%) |
| Subcutaneous tissue, lymphoma malignant lymphocytic | | | 1 (2%) | |
| Subcutaneous tissue, lymphoma malignant mixed | | | | 1 (2%) |
| Subcutaneous tissue, squamous cell carcinoma, metastatic, stomach | | 1 (2%) | | |

TABLE C1
Summary of the Incidence of Neoplasms in Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene (continued)

| | 200 ppm (40 weeks) | 312 ppm (52 weeks) | 625 ppm (13 weeks) | 625 ppm (26 weeks) |
|---|---|---|---|---|
| **Musculoskeletal System** | | | | |
| Bone | (50) | (50) | (50) | (50) |
| Neuroblastoma malignant, metastatic, brain | | | 1 (2%) | |
| Skeletal muscle | | | (2) | (2) |
| Lymphoma malignant lymphocytic | | | 1 (50%) | |
| Abdominal, squamous cell carcinoma, metastatic, stomach | | | 1 (50%) | |
| Diaphragm, hemangiosarcoma, metastatic, liver | | | | 1 (50%) |
| Diaphragm, squamous cell carcinoma, metastatic, stomach | | | | 1 (50%) |
| **Nervous System** | | | | |
| Brain | (50) | (50) | (50) | (50) |
| Adenocarcinoma, metastatic, harderian gland | | | 1 (2%) | |
| Hemangiosarcoma, metastatic, heart | | 5 (10%) | | |
| Histiocytic sarcoma | 2 (4%) | 2 (4%) | 1 (2%) | 1 (2%) |
| Lymphoma malignant lymphocytic | | | 4 (8%) | 13 (26%) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | |
| Olfactory lobe, glioma malignant | | | 2 (4%) | 1 (2%) |
| Olfactory lobe, neuroblastoma malignant | | | 2 (4%) | |
| Spinal cord | | | (1) | (2) |
| Lymphoma malignant lymphocytic | | | 1 (100%) | 2 (100%) |
| **Respiratory System** | | | | |
| Lung | (50) | (50) | (50) | (50) |
| Adenocarcinoma | | 1 (2%) | | |
| Adenocarcinoma, multiple | | | 1 (2%) | |
| Adenocarcinoma, metastatic, harderian gland | 2 (4%) | 2 (4%) | 3 (6%) | |
| Alveolar/bronchiolar adenoma | 16 (32%) | 14 (28%) | 11 (22%) | 7 (14%) |
| Alveolar/bronchiolar adenoma, multiple | 8 (16%) | 12 (24%) | 6 (12%) | 5 (10%) |
| Alveolar/bronchiolar carcinoma | 13 (26%) | 9 (18%) | 12 (24%) | 6 (12%) |
| Alveolar/bronchiolar carcinoma, multiple | 9 (18%) | 6 (12%) | 5 (10%) | 5 (10%) |
| Carcinoma, metastatic, preputial gland | | | 1 (2%) | |
| Carcinoma, metastatic, Zymbal's gland | | | 1 (2%) | 1 (2%) |
| Hemangiosarcoma, metastatic, heart | 3 (6%) | 18 (36%) | 1 (2%) | 3 (6%) |
| Hemangiosarcoma, metastatic, liver | | 1 (2%) | 1 (2%) | 1 (2%) |
| Hepatocellular carcinoma, metastatic, liver | 2 (4%) | 1 (2%) | 5 (10%) | |
| Histiocytic sarcoma | 4 (8%) | 5 (10%) | 2 (4%) | 2 (4%) |
| Lymphoma malignant lymphocytic | 6 (12%) | 1 (2%) | 9 (18%) | 23 (46%) |
| Lymphoma malignant | | 1 (2%) | | |
| Lymphoma malignant mixed | | | 1 (2%) | 2 (4%) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | |
| Osteosarcoma, metastatic, uncertain primary site | | | | 1 (2%) |
| Squamous cell carcinoma, metastatic, stomach | | 1 (2%) | 1 (2%) | 1 (2%) |

TABLE C1
**Summary of the Incidence of Neoplasms in Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene** (continued)

| | 200 ppm (40 weeks) | 312 ppm (52 weeks) | 625 ppm (13 weeks) | 625 ppm (26 weeks) |
|---|---|---|---|---|
| **Respiratory System** (continued) | | | | |
| Lung (continued) | (50) | (50) | (50) | (50) |
| Mediastinum, adenocarcinoma, metastatic, lung | | | 1 (2%) | |
| Mediastinum, alveolar/bronchiolar carcinoma, metastatic, lung | | | 1 (2%) | 1 (2%) |
| Mediastinum, carcinoma, metastatic, Zymbal's gland | | | | 1 (2%) |
| Mediastinum, hemangiosarcoma, metastatic, heart | | 1 (2%) | | 1 (2%) |
| Mediastinum, histiocytic sarcoma | | | 1 (2%) | |
| Nose | (49) | (49) | (50) | (50) |
| Lymphoma malignant lymphocytic | | | 3 (6%) | 6 (12%) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | |
| Neuroblastoma malignant, metastatic, brain | | | 1 (2%) | |
| **Special Senses System** | | | | |
| Eye | (1) | (4) | (4) | (3) |
| Adenocarcinoma, metastatic, harderian gland | | 1 (25%) | | |
| Harderian gland | (48) | (48) | (42) | (36) |
| Adenocarcinoma | 2 (4%) | 1 (2%) | 4 (10%) | |
| Adenoma | 22 (46%) | 20 (42%) | 13 (31%) | 10 (28%) |
| Bilateral, adenocarcinoma | | 1 (2%) | | |
| Bilateral, adenoma | 4 (8%) | 8 (17%) | 7 (17%) | 3 (8%) |
| Zymbal's gland | (1) | | (3) | (2) |
| Carcinoma | 1 (100%) | | 2 (67%) | 2 (100%) |
| **Urinary System** | | | | |
| Kidney | (48) | (49) | (50) | (50) |
| Adenocarcinoma, metastatic, pancreas | | 1 (2%) | | |
| Adenoma | | 1 (2%) | | |
| Hemangiosarcoma, metastatic, heart | 1 (2%) | 6 (12%) | 1 (2%) | 1 (2%) |
| Hemangiosarcoma, metastatic, mesentery | 1 (2%) | | | |
| Histiocytic sarcoma | 2 (4%) | 4 (8%) | 2 (4%) | 2 (4%) |
| Lymphoma malignant lymphocytic | 2 (4%) | 1 (2%) | 7 (14%) | 23 (46%) |
| Lymphoma malignant mixed | | | 1 (2%) | 2 (4%) |
| Mast cell tumor NOS, metastatic, bone marrow | 1 (2%) | | | 1 (2%) |
| Osteosarcoma, metastatic, uncertain primary site | | | | 1 (2%) |
| Squamous cell carcinoma, metastatic, stomach | | | 1 (2%) | 1 (2%) |
| Renal tubule, adenoma | 4 (8%) | 2 (4%) | 1 (2%) | 1 (2%) |
| Urinary bladder | (43) | (47) | (46) | (48) |
| Hemangioma | | | 1 (2%) | |
| Lymphoma malignant lymphocytic | | 1 (2%) | 1 (2%) | 13 (27%) |
| **Systemic Lesions** | | | | |
| Multiple organs[b] | (50) | (50) | (50) | (50) |
| Histiocytic sarcoma | 5 (10%) | 7 (14%) | 2 (4%) | 2 (4%) |
| Lymphoma malignant | 1 (2%) | 1 (2%) | | |
| Lymphoma malignant lymphocytic | 6 (12%) | 4 (8%) | 17 (34%) | 30 (60%) |
| Lymphoma malignant mixed | 1 (2%) | 3 (6%) | 5 (10%) | 3 (6%) |

**TABLE C1**
**Summary of the Incidence of Neoplasms in Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene** (continued)

| | 200 ppm (40 weeks) | 312 ppm (52 weeks) | 625 ppm (13 weeks) | 625 ppm (26 weeks) |
|---|---|---|---|---|
| **Neoplasm Summary** | | | | |
| Total animals with primary neoplasms[c] | 49 | 50 | 49 | 49 |
| Total primary neoplasms | 167 | 174 | 160 | 120 |
| Total animals with benign neoplasms | 41 | 41 | 34 | 22 |
| Total benign neoplasms | 94 | 85 | 73 | 41 |
| Total animals with malignant neoplasms | 43 | 50 | 49 | 49 |
| Total malignant neoplasms | 70 | 88 | 87 | 78 |
| Total animals with metastatic neoplasms | 14 | 33 | 16 | 13 |
| Total metastatic neoplasm | 48 | 98 | 32 | 43 |
| Total animals with malignant neoplasms uncertain primary site | | | | 1 |
| Total animals with neoplasms uncertain-benign or malignant | 3 | 1 | | 1 |
| Total uncertain neoplasms | 3 | 1 | | 1 |

[a] Number of animals examined microscopically at site and number of animals with lesion
[b] Number of animals with any tissue examined microscopically
[c] Primary neoplasms: all neoplasms except metastatic neoplasms

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 200 ppm for 40 Weeks**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 208 | 231 | 262 | 330 | 399 | 407 | 440 | 468 | 481 | 481 | 488 | 489 | 510 | 512 | 511 | 513 | 514 | 516 | 555 | 567 | 576 | 576 | 584 | 595 | 608 |
| **Carcass ID Number** | 2001 | 2031 | 2005 | 1983 | 1994 | 2062 | 2003 | 1995 | 2042 | 2065 | 2044 | 2041 | 2002 | 2015 | 2024 | 2021 | 2051 | 1973 | 1991 | 1994 | 1972 | 1982 | 1991 | 2063 | 2022 |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder | A | A | A | + | + | + | + | A | + | + | A | A | + | + | + | A | + | A | + | + | + | + | A | + | + |
| Intestine large | A | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | A | A | + | + | + | + | + | + | + |
| Intestine large, cecum | A | + | A | + | + | + | + | A | + | + | A | + | + | + | + | A | A | A | + | + | + | + | A | + | + |
| Intestine large, colon | A | + | A | + | + | + | + | A | + | + | A | + | + | + | + | + | A | A | + | + | + | + | + | + | + |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Intestine large, rectum | A | + | + | + | + | + | + | A | + | + | A | + | + | M | + | + | A | A | + | + | + | + | + | + | + |
| Intestine small | A | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | A | A | + | + | + | + | A | + | + |
| Intestine small, duodenum | A | + | M | + | + | + | + | A | + | + | A | + | + | + | + | A | A | A | + | + | + | + | A | + | + |
| Intestine small, ileum | A | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | A | A | + | + | + | + | A | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Intestine small, jejunum | A | + | A | + | + | + | + | A | + | + | A | + | + | + | + | + | A | A | + | + | + | + | A | + | + |
| Liver | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | X | | | | | | | | | | | | | | | | | | | X | | |
| Hepatocellular carcinoma | | | | | | X | | | | | | | X | | | | | | X | X | | | | X | |
| Hepatocellular carcinoma, multiple | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Hepatocellular adenoma | | | | | X | | | | | X | X | | | | | X | X | | | X | | | | X | |
| Hepatocellular adenoma, multiple | | | | | | | | | | | | | X | | | | | | | | | | | | X |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | X | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Mesentery | | | | | | | | | | + | + | | | | | | | | + | | | | | | |
| Fat, hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, hemangioma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Pancreas | A | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Acinus, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | X | | | |
| Pharynx | | | | | | | | | | | | | | | | | | | + | | | | | | |
| Palate, mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Salivary glands | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Stomach, forestomach | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Squamous cell papilloma | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Squamous cell papilloma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, glandular | A | + | A | + | + | + | + | A | + | + | A | A | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | + | + | |

+: Tissue examined microscopically
A: Autolysis precludes examination
M: Missing tissue
I: Insufficient tissue
X: Lesion present
Blank: Not examined

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 200 ppm for 40 Weeks** (continued)

| Number of Days on Study | 611 | 623 | 629 | 638 | 650 | 651 | 651 | 651 | 658 | 659 | 665 | 667 | 696 | 698 | 698 | 699 | 719 | 729 | 729 | 729 | 729 | 729 | 729 | 729 | 729 | Total Tissues/ Tumors |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carcass ID Number | 2052 | 1993 | 2035 | 2041 | 2061 | 2011 | 2045 | 2054 | 2003 | 2034 | 2064 | 2043 | 1971 | 2003 | 2055 | 1975 | 1974 | 1985 | 1992 | 2004 | 2012 | 2013 | 2023 | 2025 | 2053 | |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Gallbladder | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | 40 |
| Intestine large | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Intestine large, cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 42 |
| Intestine large, colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Intestine large, rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Intestine small | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Intestine small, duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 42 |
| Intestine small, ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Intestine small, jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 43 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hemangioma | | | | | | | | | | | | | | | | | | | | | X | | | | | 1 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | X | | X | | | | | | | | 4 |
| Hepatocellular carcinoma | | X | | X | | | X | X | | | | | | | | | | | | | | | | | | 9 |
| Hepatocellular carcinoma, multiple | X | | | | | | | | | | | | X | X | | | | X | | | | | | | | 5 |
| Hepatocellular adenoma | | X | X | | | X | X | X | | | | | | | | X | | | | | X | X | | | | 15 |
| Hepatocellular adenoma, multiple | | | | X | X | | | | X | | X | X | | | | | X | X | X | X | | | X | | | 12 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | X | | | | | | | | | | | 4 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | | | | | | | | | | | | 2 |
| Mesentery | | + | | | + | + | + | + | | + | | | | | | + | | | | | + | + | + | | | 13 |
| Fat, hemangioma | | | | | | | X | | | | | | | | | | | | | | | X | | | | 2 |
| Fat, hemangioma, multiple | | | | | | | | | | | | | | | | | | | | | X | | | | | 1 |
| Fat, hemangiosarcoma | | | | | | | | | | X | | | | | | | | | | | | | | | | 1 |
| Fat, hemangiosarcoma, metastatic, heart | | X | | | | | | | | | | | | | | X | | | | | | | | | | 2 |
| Fat, mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | | | | | | | | | | | | 2 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Acinus, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Pharynx | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Palate, mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | 48 |
| Stomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Stomach, forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | X | | | | | | | | | | | 3 |
| Squamous cell papilloma | | | | | | | | | | | | | | X | | | | | | | | | | | | 2 |
| Squamous cell papilloma, multiple | | | | | | | | | | | | | | | | | | | X | | | | | | | 1 |
| Stomach, glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Tooth | | | | | | | | | | | | | | | + | | | + | | + | | | | + | | 6 |

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 200 ppm for 40 Weeks** (continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 208 | 231 | 262 | 330 | 399 | 407 | 440 | 468 | 481 | 488 | 489 | 510 | 512 | 512 | 513 | 514 | 516 | 555 | 567 | 576 | 576 | 584 | 595 | 608 |
| **Carcass ID Number** | 2001 | 2003 | 2005 | 1983 | 1994 | 2006 | 2023 | 1995 | 2004 | 2006 | 2044 | 2041 | 2002 | 2015 | 2024 | 2021 | 2051 | 1973 | 1991 | 1988 | 1972 | 1982 | 1991 | 2063 | 2022 |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | X | | | | | | | | | | | | | | | | | | | X | | |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | A | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Adrenal gland, cortex | A | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland, medulla | A | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Islets, pancreatic | A | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | X | | | | | |
| Parathyroid gland | A | + | + | + | + | M | + | M | + | + | M | + | + | + | M | + | + | + | + | + | + | + | + | + | + |
| Pituitary gland | A | I | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | I | I | + | + | + | + | + | + |
| Pars intermedia, adenoma | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Thyroid gland | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epididymis | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Penis | | | | | | | | | | | | | | + | | | | | | | | | | + | |
| Preputial gland | | | + | | | | | | | | | | | + | | | | | | | | | | + | |
| Bilateral, carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prostate | A | + | + | + | + | + | + | A | + | + | A | A | + | + | + | + | A | M | + | + | + | + | + | + | + |
| Seminal vesicle | A | + | A | + | + | + | + | A | + | + | A | + | + | + | + | + | A | A | + | + | + | + | + | + | + |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | X | | | |
| Mast cell tumor NOS | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, bronchial | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | M |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Lymph node, mandibular | A | + | + | + | + | + | M | + | + | + | + | + | + | M | + | + | M | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |

TABLE C2
Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 200 ppm for 40 Weeks (continued)

| Number of Days on Study | 611 | 623 | 629 | 638 | 650 | 651 | 651 | 651 | 658 | 659 | 666 | 667 | 669 | 669 | 669 | 669 | 722 | 722 | 722 | 722 | 729 | 729 | 729 | 729 | 729 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carcass ID Number | 205 2 | 199 3 | 203 5 | 204 1 | 206 1 | 201 1 | 204 5 | 205 4 | 203 3 | 203 4 | 206 4 | 204 3 | 199 1 | 203 3 | 205 5 | 205 5 | 197 4 | 198 5 | 199 2 | 200 4 | 201 2 | 201 3 | 202 3 | 202 5 | 205 3 | Total Tissues/ Tumors |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma | | X | X | | | | | X | X | | | | X | X | X | X | | X | | X | | X | X | | X | 15 |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Adrenal gland, cortex | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Adenoma | | | | | | X | | | | | | | | | | | | | | | | | | | | 1 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | X | | | | | | | | | | | | | | | | 1 |
| Adrenal gland, medulla | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Islets, pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Parathyroid gland | + | + | + | M | + | + | + | + | + | + | + | + | + | M | M | I | + | + | + | + | M | + | + | + | + | 40 |
| Pituitary gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | 44 |
| Pars intermedia, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Thyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Follicular cell, adenoma | | | | | X | | | | | | | | | | | | | | | | | | | | X | 2 |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hemangiosarcoma, metastatic, heart | | X | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Penis | | | | | | | | | | | | + | + | | | | | | | | | | | | | 4 |
| Preputial gland | | | | | | | | | | | | | + | + | | + | | | + | | | | + | | | 8 |
| Bilateral, carcinoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Seminal vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Mast cell tumor NOS | | | | | | X | | | | | | | | | X | | | | | | | | | | | 3 |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node, bronchial | + | M | + | M | + | + | + | + | + | + | + | + | M | M | + | M | + | + | + | + | + | + | + | + | + | 43 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | X | | | | | | | | | | | 2 |
| Lymph node, mandibular | + | + | + | + | + | + | + | M | M | M | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | 42 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | | | | | | | | | | | | 2 |

TABLE C2
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 200 ppm for 40 Weeks** (continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 208 | 231 | 262 | 330 | 399 | 407 | 440 | 468 | 481 | 481 | 488 | 489 | 510 | 512 | 512 | 513 | 514 | 516 | 555 | 557 | 567 | 576 | 577 | 584 | 595 | 608 |
| **Carcass ID Number** | 2001 | 2003 | 2005 | 1983 | 1994 | 2002 | 2003 | 1995 | 2004 | 2006 | 2004 | 2001 | 2002 | 2001 | 2002 | 2021 | 2025 | 1973 | 1981 | 1984 | 1987 | 1992 | 1991 | 2006 | 2002 |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mediastinal | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | M | + | + | + | + | + | + | + | M | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Lymph node, mesenteric | M | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | M |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | X | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Spleen | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Thymus | + | + | + | M | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | M | + | + | + | + | M |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | M | M | M | M | M | M | M | M | M | M | + | M | M | + | M | M | M | M | M | + | M | M | M | M | M |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Subcutaneous tissue, hemangioma | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Subcutaneous tissue, hemangiosarcoma | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Subcutaneous tissue, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 200 ppm for 40 Weeks** (continued)

| Number of Days on Study | 611 | 623 | 629 | 638 | 650 | 651 | 651 | 651 | 658 | 659 | 665 | 667 | 696 | 698 | 698 | 699 | 722 | 729 | 729 | 729 | 729 | 729 | 729 | 729 | 729 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carcass ID Number | 205 2 | 199 3 | 203 5 | 204 1 | 206 1 | 201 1 | 204 5 | 205 4 | 203 3 | 203 4 | 206 4 | 204 3 | 197 1 | 203 3 | 205 5 | 197 5 | 197 4 | 198 5 | 199 2 | 200 4 | 201 2 | 201 3 | 202 3 | 202 5 | 205 3 | Total Tissues/ Tumors |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mediastinal | + | + | M | M | + | + | M | M | + | + | M | + | + | + | + | + | + | M | + | + | + | + | M | M | + | 39 |
| Hemangiosarcoma, metastatic, heart | | X | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | | | | | | | | | | | | 2 |
| Lymph node, mesenteric | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | 44 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | X | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | X | | | | | | | | | | | 4 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| Histiocytic sarcoma | X | X | | | | | | | | | | | | | X | | | | | | | | | | | 4 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | | | | | | | | | | | | 2 |
| Thymus | I | + | + | + | + | + | + | + | + | + | + | + | M | + | + | M | + | + | + | + | + | M | + | I | + | 41 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | | | | | | | | | | | | 2 |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | M | M | M | M | M | M | M | M | M | M | M | M | M | + | M | M | M | + | M | M | M | M | M | M | M | 5 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Subcutaneous tissue, hemangioma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Subcutaneous tissue, hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Subcutaneous tissue, hemangiosarcoma, metastatic, heart | | X | | | | | | | | | | | | | | | | X | | | | | | | | 2 |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 2000 ppm for 40 Weeks** (continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 208 | 231 | 262 | 330 | 399 | 407 | 440 | 468 | 481 | 481 | 488 | 489 | 510 | 511 | 512 | 513 | 514 | 516 | 555 | 567 | 576 | 576 | 584 | 595 | 608 |
| **Carcass ID Number** | 2001 | 2003 | 2005 | 1983 | 1994 | 2026 | 2003 | 1995 | 2024 | 2025 | 2004 | 2014 | 2002 | 2015 | 2024 | 2021 | 2025 | 1973 | 1981 | 1984 | 1972 | 1982 | 1991 | 2063 | 2022 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | A | + | I | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | X | | | | | X | | | | | | | |
| Alveolar/bronchiolar adenoma | | | | | X | | X | X | | | | | X | X | | X | | | | | | | X | | |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma | | | | | | | | | | X | | | | | | X | | | | | X | | | X | X |
| Alveolar/bronchiolar carcinoma, multiple | | | | | | | | | X | | | | | | X | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | X | | | | | | | | | | | | | | | | | | | X | | |
| Hepatocellular carcinoma, metastatic, liver | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | X | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | + |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ear | | | | | | | | | | | + | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian gland | M | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | | | X | | | | | X | | | | | | | |
| Adenoma | | | | | | | X | | | | | X | X | X | X | X | | | | X | | | X | | |
| Bilateral, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zymbal's gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, mesentery | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | X | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Renal tubule, adenoma | | | | | | | | | | | | | | | | | | X | | X | | | | | |
| Urethra | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary bladder | A | + | A | + | + | + | + | A | + | + | A | A | + | + | + | + | A | A | + | + | + | + | + | + | + |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | X | X | | | |
| Lymphoma malignant | | | | | | | | | | | | | | | | | X | | | | | | | | |
| Lymphoma malignant lymphocytic | X | X | | | | | X | X | | | | | | | | | | | | | | | | | |
| Lymphoma malignant mixed | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 200 ppm for 40 Weeks** (continued)

| Number of Days on Study | 611 | 623 | 629 | 638 | 650 | 651 | 651 | 651 | 658 | 659 | 665 | 667 | 696 | 698 | 698 | 699 | 729 | 729 | 729 | 729 | 729 | 729 | 729 | 729 | 729 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Carcass ID Number** | 205 2 | 199 3 | 203 5 | 204 1 | 206 1 | 201 1 | 204 5 | 205 4 | 203 3 | 203 4 | 206 4 | 204 3 | 197 1 | 203 3 | 205 5 | 197 5 | 197 4 | 198 5 | 199 2 | 200 4 | 201 2 | 201 3 | 202 3 | 202 5 | 205 3 | Total Tissues/ Tumors |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Alveolar/bronchiolar adenoma | X | | | | | X | | X | | | X | | | | | | | | | X | X | X | | X | X | 16 |
| Alveolar/bronchiolar adenoma, multiple | | X | | | X | | | | X | | | | | X | | | X | | X | | | | X | | | 8 |
| Alveolar/bronchiolar carcinoma | | | | | | X | X | X | | | | | X | | | | X | | | X | | X | X | | | 13 |
| Alveolar/bronchiolar carcinoma, multiple | | | X | | | | | | | X | | X | | | | X | | X | | | | | | X | X | 9 |
| Hemangiosarcoma, metastatic, heart | | X | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Hepatocellular carcinoma, metastatic, liver | | | | | | | | | | | | | X | | | | | | | | | | | | | 2 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | X | | | | | | | | | | | 4 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | | | | | | | | | | | | 1 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | X | | | | | | | | | | | | | | | | | | | | 1 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| **Special Senses System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ear | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Eye | | | | | | | | | | | + | | | | | | | | | | | | | | | 1 |
| Harderian gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Adenoma | X | | X | | | | | X | | X | X | | X | X | X | X | | | X | | X | X | | X | X | 22 |
| Bilateral, adenoma | | X | | | X | X | | | | | | | | | | | X | | | | | | | | | 4 |
| Zymbal's gland | | | | | + | | | | | | | | | | | | | | | | | | | | | 1 |
| Carcinoma | | | | | X | | | | | | | | | | | | | | | | | | | | | 1 |
| **Urinary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Hemangiosarcoma, metastatic, heart | | X | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemangiosarcoma, metastatic, mesentery | | | | | | | | | | X | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | X | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Renal tubule, adenoma | X | | | | | | | | | | | | | | X | | | | | | | | | | | 4 |
| Urethra | | | | | | | | | | | | | | | | | | | | | | | | | + | 1 |
| Urinary bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 43 |
| **Systemic Lesions** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple organs | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic sarcoma | X | X | | | | | | | | | | | | | X | | | | | | | | | | | 5 |
| Lymphoma malignant | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymphoma malignant lymphocytic | | | | | | | | | | | | | | | | X | | | | X | | | | | | 6 |
| Lymphoma malignant mixed | | | | | | | | X | | | | | | | | | | | | | | | | | | 1 |

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 312 ppm for 52 Weeks**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 1 | 8 | 1 | 2 | 2 | 4 | 6 | 6 | 6 | 8 | 9 | 0 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 4 | 7 | 7 | 9 | 9 |
| | 7 | 9 | 4 | 6 | 8 | 4 | 4 | 4 | 9 | 2 | 2 | 1 | 2 | 5 | 8 | 8 | 1 | 3 | 3 | 6 | 9 | 6 | 9 | 0 | 4 |
| **Carcass ID Number** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| | 9 | 7 | 1 | 1 | 9 | 4 | 8 | 8 | 5 | 0 | 2 | 5 | 2 | 7 | 2 | 0 | 1 | 8 | 6 | 4 | 3 | 4 | 9 | 6 | 0 |
| | 3 | 4 | 5 | 4 | 1 | 4 | 2 | 3 | 2 | 2 | 2 | 4 | 4 | 5 | 5 | 4 | 1 | 5 | 5 | 3 | 2 | 5 | 5 | 3 | 1 |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder | A | + | A | A | A | A | + | + | A | A | + | A | + | A | A | A | + | + | A | A | A | + | A | A | + |
| Intestine large | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine large, cecum | A | + | A | + | A | A | + | + | + | + | + | + | + | + | I | + | + | + | + | A | + | + | + | + | + |
| Intestine large, colon | A | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + |
| Intestine large, rectum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine small | A | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + |
| Intestine small, duodenum | A | + | A | A | + | A | + | + | A | + | + | A | + | I | + | + | + | + | + | A | + | + | + | + | + |
| Intestine small, ileum | A | + | A | + | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | A | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine small, jejunum | A | + | A | A | A | A | + | + | + | + | + | + | + | A | I | + | + | + | + | A | A | + | A | A | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | X | | | | | | | | | | | | | | | | | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | | X | X | | | X | X | X | | | X | X | X | | | X | | X | | | | X |
| Hepatoblastoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular carcinoma | | | | | | | | | | X | | X | | | | | | | | | | X | | | |
| Hepatocellular carcinoma, multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocellular adenoma | | | | X | | | | | | | X | | | X | | | | X | | | | X | | | |
| Hepatocellular adenoma, multiple | | | | | | | | | | | | | | | X | | | | | X | | | | | |
| Histiocytic sarcoma | | | X | | | | | X | | | | X | | | | | | | | | | | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Mesentery | | | + | | | | | | | | + | | + | | + | + | | | | | | | | | + |
| Adenocarcinoma, metastatic, pancreas | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Fat, hemangiosarcoma, metastatic, heart | | | | | | | | | | | X | | | | X | X | | | | | | | | | X |
| Fat, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Pancreas | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Acinus, adenocarcinoma | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Acinus, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Acinus, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Salivary glands | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + |
| Stomach | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, forestomach | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Squamous cell carcinoma | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Squamous cell papilloma | | | | | | | | | | | | X | | | | | | | | | | | | | X |
| Stomach, glandular | A | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | X | | | | | | | | | | | | |

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 312 ppm for 52 Weeks** (continued)

| Number of Days on Study | 495 | 506 | 510 | 516 | 539 | 539 | 546 | 546 | 554 | 559 | 563 | 573 | 593 | 604 | 607 | 616 | 625 | 635 | 637 | 639 | 649 | 664 | 666 | 720 | 729 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carcass ID Number | 2131 | 2092 | 2123 | 2141 | 2094 | 2135 | 2133 | 2161 | 2084 | 2134 | 2135 | 2115 | 2151 | 2162 | 2121 | 2112 | 2113 | 2105 | 2103 | 2077 | 2071 | 2072 | 2064 | 2081 | 2014 | Total Tissues/ Tumors |
| **Alimentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | M | + | + | + | + | M | + | M | + | 46 |
| Gallbladder | + | + | M | A | + | + | + | + | + | + | A | + | A | + | + | + | + | A | + | + | A | M | + | + | + | 27 |
| Intestine large | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine large, cecum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | 41 |
| Intestine large, colon | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | 44 |
| Intestine large, rectum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine small | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | 44 |
| Intestine small, duodenum | + | + | + | A | + | + | + | + | + | + | + | + | M | + | + | + | + | A | + | + | A | + | + | + | + | 38 |
| Intestine small, ileum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | 40 |
| Histiocytic sarcoma | | | | | | | | | X | | | | | | | | | | | | | | | | | 1 |
| Intestine small, jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | 37 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Alveolar/bronchiolar carcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemangiosarcoma | | | | | | | | | | | | | | | | | | | | X | | | | | | 1 |
| Hemangiosarcoma, metastatic, heart | | X | | X | | | | | | X | X | | | X | X | | | | | | | | | | X | 18 |
| Hepatoblastoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| Hepatocellular carcinoma | | | | | | | X | | | X | | | | | | | X | | | | X | | | X | | 8 |
| Hepatocellular carcinoma, multiple | | | X | | | | | | | | | | | X | | | | | | | | | | | | 2 |
| Hepatocellular adenoma | | | | | | | | | | | X | | | | | | | | X | | X | | X | | X | 10 |
| Hepatocellular adenoma, multiple | | X | | | X | | X | | | | | | | | | | X | X | | X | | | | X | | 9 |
| Histiocytic sarcoma | | | | | | | | | X | | | | | | | X | | | | | | | | | | 5 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | X | | | | | 1 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | X | | | | | | | | 3 |
| Mesentery | | | | | + | | | | | | + | | | + | | | + | + | | | | | | + | + | 13 |
| Adenocarcinoma, metastatic, pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Fat, hemangiosarcoma, metastatic, heart | | | | | | | | | | | X | | | X | | | | | | | | | | X | | 7 |
| Fat, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | X | | | | | | | | 2 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Acinus, adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Acinus, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Acinus, histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| Acinus, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Salivary glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Stomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | 48 |
| Stomach, forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | 48 |
| Squamous cell carcinoma | | | | | | | | | | | | X | X | X | | | | X | | | | | | | | 5 |
| Squamous cell papilloma | | | | | | | | | | | X | | | | | | | | | | | | | | X | 4 |
| Stomach, glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | 47 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

TABLE C2
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 312 ppm for 52 Weeks** (continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 1 | 8 | 1 | 2 | 2 | 4 | 6 | 6 | 6 | 8 | 9 | 0 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 4 | 7 | 7 | 9 | 9 |
| | 7 | 9 | 4 | 6 | 8 | 4 | 4 | 4 | 9 | 2 | 2 | 1 | 2 | 5 | 8 | 8 | 1 | 3 | 3 | 6 | 9 | 6 | 9 | 0 | 4 |
| **Carcass ID Number** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| | 9 | 7 | 1 | 1 | 9 | 4 | 8 | 8 | 5 | 0 | 2 | 5 | 2 | 7 | 2 | 0 | 1 | 8 | 6 | 4 | 3 | 4 | 9 | 6 | 0 |
| | 3 | 4 | 5 | 4 | 1 | 4 | 2 | 3 | 2 | 2 | 2 | 4 | 4 | 5 | 5 | 4 | 1 | 5 | 5 | 3 | 2 | 5 | 5 | 3 | 1 |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma | | | | | X | X | X | X | X | X | X | | | X | X | X | | | X | X | X | | X | X | X |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal gland, cortex | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, pancreas | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Adrenal gland, medulla | M | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, pancreas | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Pheochromocytoma benign | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Islets, pancreatic | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid gland | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + |
| Pituitary gland | I | + | + | + | + | + | I | + | + | M | + | + | I | + | I | + | + | + | + | + | I | + | + | + | + |
| Thyroid gland | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, metastatic, pancreas | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Preputial gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prostate | + | + | + | + | + | A | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + |
| Seminal vesicle | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | A | + |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | X | | | | | | | | | | | | | | | | | |
| Mast cell tumor NOS | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Axillary, hemangiosarcoma, metastatic, heart | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Renal, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Lymph node, bronchial | M | + | + | + | + | + | + | M | M | M | + | M | M | M | + | M | + | M | + | M | M | + | M | + | + |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Histiocytic sarcoma | | | X | | | | | | | | | | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mandibular | + | + | + | + | + | + | + | M | M | M | + | M | M | M | + | M | + | + | M | M | M | + | + | + | + |

**Table C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 312 ppm for 52 Weeks** (continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Days on Study | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | |
| | 9 | 0 | 1 | 1 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 7 | 9 | 0 | 0 | 1 | 2 | 3 | 3 | 3 | 4 | 6 | 6 | 2 | 2 | |
| | 5 | 6 | 0 | 6 | 9 | 9 | 6 | 6 | 4 | 9 | 3 | 3 | 3 | 4 | 7 | 6 | 5 | 5 | 7 | 9 | 9 | 4 | 6 | 0 | 9 | |
| Carcass ID Number | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | Total |
| | 3 | 9 | 2 | 4 | 9 | 3 | 3 | 6 | 8 | 3 | 5 | 5 | 5 | 6 | 2 | 1 | 1 | 0 | 0 | 7 | 7 | 7 | 6 | 8 | 4 | Tissues/ |
| | 1 | 2 | 3 | 1 | 4 | 5 | 3 | 1 | 4 | 4 | 3 | 5 | 1 | 2 | 1 | 2 | 3 | 5 | 3 | 3 | 1 | 2 | 4 | 1 | 2 | Tumors |
| **Cardiovascular System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma | X | X | | X | X | | X | | | X | X | X | X | X | X | | X | X | X | | X | | | X | X | 33 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| **Endocrine System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adrenal gland, cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenocarcinoma, metastatic, pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Adrenal gland, medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Adenocarcinoma, metastatic, pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pheochromocytoma benign | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Islets, pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenoma | | | | | | | | | | | | | | | | | X | | | | | | | | | 1 |
| Parathyroid gland | + | + | + | + | + | + | + | + | + | M | M | + | + | + | + | + | + | + | + | + | M | M | + | + | + | 44 |
| Pituitary gland | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 43 |
| Thyroid gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Follicular cell, adenoma | | | | | | | | | | | | | | | | | | | | | | X | | | | 1 |
| **General Body System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Genital System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, metastatic, pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Preputial gland | | | | | | | | | | | | | | | | | | | | + | | + | | + | + | 4 |
| Carcinoma | | | | | | | | | | | | | | | | | | | | X | | X | | | X | 3 |
| Bilateral, carcinoma | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Seminal vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| **Hematopoietic System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 2 |
| Mast cell tumor NOS | | | | | | | | | | | | | | | | | | | | | X | | | | | 1 |
| Lymph node | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Axillary, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Renal, histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | X | | | | 1 |
| Renal, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph node, bronchial | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 37 |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | X | | | | 3 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | X | | | | | | | | 1 |
| Lymph node, mandibular | + | M | + | M | + | + | M | + | I | M | M | + | + | + | M | + | + | M | + | + | + | + | M | + | + | 31 |

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 312 ppm for 52 Weeks** (continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 217 | 289 | 314 | 326 | 328 | 344 | 364 | 364 | 369 | 382 | 399 | 401 | 422 | 425 | 428 | 433 | 441 | 443 | 443 | 446 | 449 | 476 | 479 | 490 | 494 |
| **Carcass ID Number** | 203 | 207 | 211 | 211 | 209 | 214 | 208 | 208 | 215 | 210 | 222 | 215 | 224 | 207 | 225 | 204 | 211 | 208 | 265 | 243 | 232 | 245 | 249 | 263 | 201 |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mediastinal | + | + | + | + | M | M | + | + | M | + | + | + | + | + | + | + | + | + | + | M | + | + | M | + | + |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | | | | | | X | | | | X | | | | | | | | | | | | | |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Lymph node, mesenteric | + | + | + | + | M | M | + | + | + | + | + | I | + | + | M | + | + | + | + | + | + | + | + | M | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Histiocytic sarcoma | | | X | | | | | X | | | | | | | | | | | | | | | | | X |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Spleen | A | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Histiocytic sarcoma | | | X | | | | | X | | | | X | | | | | | | | | | | | | |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | + | + | I | + | + | + | + | + | + | + | M | + | + | + | + | I | M | + | + | M | + | + | + | + | + |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | M | M | M | M | M | M | M | M | M | M | + | M | M | M | M | M | M | M | I | M | M | I | M | M | M |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Sebaceous gland, adenoma | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Subcutaneous tissue, hemangiosarcoma, metastatic, heart | | | | | | | | | | | X | | | | X | | | | | | | | | | X |
| Subcutaneous tissue, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | X | | | | | | | | | | | | |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal muscle | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | X | | X | | | | X | | | | | | | | | | X |
| Histiocytic sarcoma | | | | | | | | X | | | | | | | | | | | | | | | | | |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | | | | X | | | | | | | | |
| Alveolar/bronchiolar adenoma | | | | | | X | X | | | | | | | X | | | | | X | X | X | X | | | X |
| Alveolar/bronchiolar adenoma, multiple | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar carcinoma | | | | | | | | | | | | | | | | | | | | | X | X | | | |
| Alveolar/bronchiolar carcinoma, multiple | | | | | | | | | | | | | | | | | | X | | | | | | | |

**TABLE C2**
**Individual Animal Tumor Pathology of Male Mice in the Stop-Exposure Inhalation Study of 1,3-Butadiene: 312 ppm for 52 Weeks** (continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Days on Study** | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | |
| | 9 | 0 | 1 | 1 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 7 | 9 | 0 | 0 | 1 | 2 | 3 | 3 | 3 | 4 | 6 | 6 | 2 | 2 | |
| | 5 | 6 | 0 | 6 | 9 | 9 | 6 | 6 | 4 | 9 | 3 | 3 | 3 | 4 | 7 | 6 | 5 | 5 | 7 | 9 | 9 | 4 | 6 | 0 | 9 | |
| **Carcass ID Number** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | **Total Tissues/ Tumors** |
| | 3 | 9 | 2 | 4 | 9 | 3 | 3 | 6 | 8 | 3 | 5 | 5 | 5 | 6 | 2 | 1 | 1 | 0 | 0 | 7 | 7 | 7 | 6 | 8 | 4 | |
| | 1 | 2 | 3 | 1 | 4 | 5 | 3 | 1 | 4 | 4 | 3 | 5 | 1 | 2 | 1 | 2 | 3 | 5 | 3 | 3 | 1 | 2 | 4 | 1 | 2 | |
| **Hematopoietic System** (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph node, mediastinal | + | + | M | + | + | + | + | + | + | + | M | + | M | M | + | + | + | + | + | + | + | + | + | + | + | 41 |
| Adenocarcinoma, metastatic, lung | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | X | | | | 4 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | X | | | | | | | | 2 |
| Lymph node, mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | 44 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Histiocytic sarcoma | | | | | | | | | X | | | | | | | X | | | | | | X | | | | 6 |
| Squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | X | | | | | | X | | | | | | | | 3 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | X | | | X | | | | | | X | | | | | | | 3 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 4 |
| Mast cell tumor NOS, metastatic, bone marrow | | | | | | | | | | | | | | | | | | | | | X | | | | | 1 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M | M | M | M | + | M | M | M | 37 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| **Integumentary System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary gland | M | M | M | M | + | M | M | M | M | M | + | M | M | M | M | M | M | M | M | M | M | + | M | M | M | 4 |
| Skin | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Sebaceous gland, adenoma | | | X | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Subcutaneous tissue, hemangiosarcoma, metastatic, heart | | | | | | | | | | | | | X | | | | | | | | | | | | | 4 |
| Subcutaneous tissue, squamous cell carcinoma, metastatic, stomach | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Musculoskeletal System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal muscle | | | | | | | | | | | | | | | | | | M | | | | | | | | |
| **Nervous System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma, metastatic, heart | | | | | | | | | | | X | | | | | | | | | | | | | | | 5 |
| Histiocytic sarcoma | | | | | | | | | | | | | | | | X | | | | | | | | | | 2 |
| **Respiratory System** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Adenocarcinoma, metastatic, harderian gland | | | | | | | | | | | | | | | | | | | | | | | | X | | 2 |
| Alveolar/bronchiolar adenoma | | | X | | | X | X | | | | | | | X | | | | | | X | X | | | | | 14 |
| Alveolar/bronchiolar adenoma, multiple | X | X | | | | | | | | X | | X | X | | X | X | | | X | | | X | X | | X | 12 |
| Alveolar/bronchiolar carcinoma | | | | | X | X | X | | | | | | | X | | X | X | | | | | | | | X | 9 |
| Alveolar/bronchiolar carcinoma, multiple | | | | | | | | | | | X | | | | | | | X | | X | | X | X | | | 6 |