



DEPARTMENT OF HEALTH AND HUMAN SERVICES

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Food and Drug Administration
New Orleans District
Nashville Branch Office
297 Plus Park Blvd.
Nashville, TN 37217

Telephone: 615-781-5380
Facsimile: 615-781-5391

January 14, 2004

Warning Letter No. 2004-NOL-11

VIA FEDERAL EXPRESS
OVERNIGHT DELIVERY

Pete DeBusk, President and CEO
DeRoyal Industries Inc.
200 DeBusk Lane
Powell, Tennessee 37849

Dear Mr. DeBusk:

During an inspection of your establishment, located at 1211 Highway 33 South and 1595 Highway 33 South, New Tazewell, Tennessee, on November 20 - 21, December 2-3, 5 and 9, 2003, our investigator determined that your Multidex Wound Dressing Products (powder and gel) are adulterated within the meaning of Section 501(h) the Act [21 U.S.C § 351(h)], in that the methods used in, or the facilities or controls used for the device's manufacture, packing, storage, or installation are not in conformity with applicable Current Good Manufacturing Practice (CGMP) requirements, which are set forth in the Quality System Regulation (QSR) for medical devices as specified in Title 21, *Code of Federal Regulations* (CFR), Part 820.

The inspection revealed the following violations:

1. Your firm's sampling plans are not based on a valid statistical rationale as required by 21 CFR 820.250(b). Specifically, the bioburden samples used for validation of the current sterilization cycle for the Multidex were collected during a period of 3 days (for powder) and 7 days (for gel) without a major equipment cleaning when, according to your records, production runs have lasted as long as 1 month for powders and approximately 1½ months for gels before a major equipment cleaning.
2. Your firm failed to establish and maintain procedures for implementing corrective and preventive action, including requirements for identifying the action(s) needed to correct and prevent recurrence of non-conforming product and other quality problems as required by 21 CFR 820.100(a)(3). Specifically, you did not take appropriate actions for product on the market or in house when a dose audit failure occurred.

3. Your firm failed to conduct process validation as required by 21 CFR 820.75.
 - a. Process validation activities and results have not been documented fully as required by 21 CFR 820.75(a). Specifically, records were not available to show that the Burst Test on lot 31255 was performed at the maximum sterilization dose.
 - b. There is no documentation of monitoring and control methods and data for a validated process as required by 21 CFR 820.75(b)(2). Specifically, you do not have all information regarding dose mapping, load patterns, and dosimeter locations, currently in use by your contract sterilizer.
 - c. There is no documentation of the revalidation of a process conducted in response to changes or process deviations as required by 21 CFR 820.75(c). Specifically, your firm failed to document approval to increase the maximum sterilization dose from 15 to 20 kGy for Multidex and a lack of Multidex bioburden limits even though at least two Standard Operating Procedures (SOPs) require such limits.

4. Your firm failed to establish and maintain design controls procedures as required by 21 CFR 820.30.
 - a. The design plan does not describe the design and development activities and does not identify or describe the interfaces with different groups or activities as required by 21 CFR 820.30(b). Specifically, the Multidex Design Plan 1999/40/001 does not describe any specific activities to be performed.
 - b. Design input requirements were not documented as required by 21 CFR 820.30(c). Specifically, design control records were frequently undated and/or lacked references, such as lot number identifying the nature of the information on the document.
 - c. Design output procedures do not ensure that those design outputs essential for the proper functioning of the device are not identified as required by 21 CFR 820.30(d). Specifically, the Multidex Design History File did not include essential outputs, such as finished product specifications, bill of materials, pyrogen test results, and complete equipment validation data.
 - d. Design verification did not confirm that the design output meets the design input requirements as required by 21 CFR 820.30(f). Specifically, design verification was reportedly performed, but did not include documented reconciliation of design inputs vs. design outputs.
 - e. Design validation was not performed under defined operating conditions on initial production units, lots, or batches, or their equivalents, and the results of the design validation were not documented in the design history file as required by 21 CFR 820.30(g). Specifically, validation studies were not performed per protocol and you failed to adequately review validation data that was performed.
 - f. Procedures were not established and maintained to ensure that the device design was correctly translated into production specifications as required by 21 CFR 820.30(h). Specifically, your firm failed to document training as a requirement and failed to document that training was performed during the design project.

5. Your firm failed to establish and maintain procedures for acceptance of finished devices as required by 21 CFR 820.80(d). Specifically, for Multidex Powder, no acceptance activities are performed other than record review and, for Multidex Gel, an assay for ascorbic acid was not performed as required by the specifications.
6. Your firm's schedules for the adjustment, cleaning, and other maintenance of equipment were not established as required by 21 CFR 820.70(g)(1). Specifically, Multidex cleaning procedures do not describe minor cleaning and major cleaning frequencies.
7. Your firm's procedures for control and distribution of finished devices failed to ensure that expired or deteriorated devices are not distributed as required by 21 CFR 820.160(a). Specifically, aging studies designed to justify Multidex expiry dates revealed protocol deficiencies, failure to meet acceptance criteria, and failure to perform specific tests at specified intervals. There were no formal conclusions drawn about the studies, and the expiry dates were not approved formally. The expiry date for Multidex Powder was 2 years, but was changed to 5 years, with no documented approval for the change.
8. Your firm failed to establish and maintain procedures to ensure that all purchased or otherwise received product and service conform to specified requirements as required by 21 CFR 820.50. Specifically, procedures for receiving components fructose and glycerin did not provide assurance that they would meet USP specifications. Different written procedures for receiving labels and labeling contained contradictory requirements and sampling/inspection procedures always did not comply with written procedures.
9. Your firm's device history record was not maintained to demonstrate that the device is manufactured in accordance with the device master record as required by 21 CFR 820.184. Specifically, the device history record for Multidex lot 228865 was incomplete in that several line entries were blank. However, final review of the record was performed, and the lot was released.
10. Your firm conducted incomplete complaint procedures as required by 21 CFR 820.198.
 - a. Complaints involving the possible failure of a device to meet any of its specifications were not processed in a uniform and timely manner and were not investigated as required by 21 CFR 820.198(a) & (c). Specifically, the complaint handling SOP requires an investigation within 30 days. Ten of 14 complaints reviewed, when the complaint was more than 30 days old (up to 6 months old), did not contain the results of an investigation, or justification for not performing an investigation.

This letter is not intended to be an all-inclusive list of deficiencies at your facility. It is your responsibility to ensure adherence to each applicable requirement of the Act and of FDA regulations. The specific violations noted in this letter and the Form FDA 483 issued at the conclusion of the inspection may be symptomatic of serious underlying problems in your establishment's Quality System. You are responsible for investigating and determining the cause of the violations identified by the U.S. Food and Drug Administration (FDA).

Federal agencies are advised of the issuance of all warning letters about devices so that they may take this information into account when considering the award of contracts. Additionally, no requests for Certificates to Foreign Governments will be approved until the violations related to the subject device have been corrected.

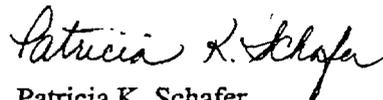
You should take prompt action to correct these deviations. Failure to promptly correct these deviations may result in regulatory action being initiated by the FDA without further notice. These actions include, but are not limited to, seizure, injunction, and/or civil penalties.

Please notify this office in writing within fifteen (15) working days of receipt of this letter of the specific steps you have taken to correct the noted violations, including an explanation of each step being taken to identify and make corrections to any underlying system problems necessary to assure that similar violations will not occur.

If corrective action cannot be completed within fifteen (15) working days, please state the reason for the delay and the time within which the corrections will be completed.

Your reply should be directed to the attention of Joseph E. Hayes, Compliance Officer, Food and Drug Administration, 297 Plus Park Boulevard, Nashville, Tennessee 37217.

Sincerely,



Patricia K. Schafer
Acting District Director
New Orleans District

Enclosures:

Form FDA 483
21 CFR 820

cc: Maggie Davis, Plant Manager
DeRoyal Industries Inc.
1211 Highway 33 South
New Tazewell, TN 37825-5041