Analytical Results for Thallium in Infant Formula (FY2023-2025)

The data in this table represent 312 samples of infant formulas tested in FY2023-2025 as part of a special survey.

Sample Number	Fiscal Year	Simplified Product Label	Thallium Concentration (ppb)[a], [b]
1	2023	Infant Formula, Powder, Cow Milk-based	<LOD
2	2023	Infant Formula, Powder, Cow Milk-based	<LOD
3	2023	Infant Formula, Powder, Cow Milk-based	<LOD
4	2023	Infant Formula, Powder, Cow Milk-based	<LOD
5	2023	Infant Formula, Powder, Cow Milk-based	<LOD
6	2023	Infant Formula, Powder, Cow Milk-based	<LOD
7	2023	Infant Formula, Powder, Cow Milk-based	<LOD
8	2023	Infant Formula, Powder, Cow Milk-based	<LOD
9	2023	Infant Formula, Powder, Soy-based	<LOD
10	2023	Infant Formula, Powder, Cow Milk-based	<LOD
11	2023	Infant Formula, Powder, Cow Milk-based	<LOD
12	2023	Infant Formula, Powder, Cow Milk-based	<LOD
13	2023	Infant Formula, Powder, Cow Milk-based	<LOD
14	2023	Infant Formula, Powder, Cow Milk-based	<LOD
15	2023	Infant Formula, Powder, Cow Milk-based	<LOD
16	2023	Infant Formula, Powder, Cow Milk-based	<LOD
17	2023	Infant Formula, Powder, Cow Milk-based	<LOD
18	2023	Infant Formula, Powder, Cow Milk-based	<LOD
19	2023	Infant Formula, Powder, Cow Milk-based	<LOD
20	2023	Infant Formula, Powder, Cow Milk-based	<LOD
21	2023	Infant Formula, Powder, Cow Milk-based	<LOD
22	2023	Infant Formula, Powder, Cow Milk-based	<LOD
23	2023	Infant Formula, Powder, Cow Milk-based	<LOD
24	2023	Infant Formula, Powder, Cow Milk-based	<LOD
25	2023	Infant Formula, Powder, Cow Milk-based	<LOD
26	2023	Infant Formula, Powder, Cow Milk-based	<LOD
27	2023	Infant Formula, Powder, Cow Milk-based	<LOD
28	2023	Infant Formula, Powder, Cow Milk-based	<LOD
29	2023	Infant Formula, Powder, Cow Milk-based	<LOD
30	2023	Infant Formula, Powder, Cow Milk-based	<LOD
31	2024	Infant Formula, Powder, Cow Milk-based	<LOD
32	2024	Infant Formula, Powder, Cow Milk-based	<LOD
33	2024	Infant Formula, Powder, Cow Milk-based	<LOD
34	2024	Infant Formula, Powder, Cow Milk-based	<LOD
35	2024	Infant Formula, Powder, Cow Milk-based	<LOD
36	2024	Infant Formula, Powder, Cow Milk-based	<LOD
37	2024	Infant Formula, Powder, Cow Milk-based	<LOD
38	2024	Infant Formula, Powder, Cow Milk-based	<LOD
39	2024	Infant Formula, Powder, Cow Milk-based	<LOD
40	2024	Infant Formula, Powder, Cow Milk-based	<LOD
41	2024	Infant Formula, Powder, Cow Milk-based	<LOD
42	2024	Infant Formula, Powder, Cow Milk-based	<LOD
43	2024	Infant Formula, Powder, Cow Milk-based	<LOD
44	2024	Infant Formula, Powder, Cow Milk-based	<LOD
45	2024	Infant Formula, Powder, Cow Milk-based	<LOD
46	2024	Infant Formula, Powder, Cow Milk-based	<LOD
47	2024	Infant Formula, Powder, Cow Milk-based	<LOD
48	2024	Infant Formula, Powder, Cow Milk-based	<LOD
49	2024	Infant Formula, Powder, Cow Milk-based	<LOD
50	2024	Infant Formula, Powder, Cow Milk-based	<LOD
51	2024	Infant Formula, Powder, Cow Milk-based	<LOD
52	2024	Infant Formula, Powder, Cow Milk-based	<LOD
53	2024	Infant Formula, Powder, Cow Milk-based	<LOD
55	2024	Infant Formula, Powder, Cow Milk-based	<LOD
56	2024	Infant Formula, Powder, Cow Milk-based	<LOD
57	2024	Infant Formula, Powder, Cow Milk-based	<LOD
58	2024	Infant Formula, Powder, Soy-based	<LOD
59	2024	Infant Formula, Powder, Cow Milk-based	<LOD
60	2024	Infant Formula, Powder, Cow Milk-based	<LOD
61	2024	Infant Formula, Powder, Cow Milk-based	<LOD
62	2024	Infant Formula, Powder, Cow Milk-based	<LOD
63	2024	Infant Formula, Powder, Cow Milk-based	<LOD
64	2024	Infant Formula, Powder, Cow Milk-based	<LOD
65	2024	Infant Formula, Powder, Cow Milk-based	<LOD
66	2024	Infant Formula, Powder, Soy-based	<LOD
67	2024	Infant Formula, Powder, Cow Milk-based	<LOD
68	2024	Infant Formula, Powder, Cow Milk-based	<LOD
69	2024	Infant Formula, Powder, Soy-based	<LOD
70	2024	Infant Formula, Powder, Cow Milk-based	<LOD
72	2024	Infant Formula, Powder, Cow Milk-based	<LOD
73	2024	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
74	2024	Infant Formula, Powder, Cow Milk-based	<LOD
75	2024	Infant Formula, Powder, Cow Milk-based	<LOD
76	2024	Infant Formula, Powder, Cow Milk-based	<LOD
77	2024	Infant Formula, Powder, Soy-based	<LOD
78	2024	Infant Formula, Powder, Cow Milk-based	<LOD
79	2024	Infant Formula, Powder, Cow Milk-based	<LOD
80	2024	Infant Formula, Powder, Cow Milk-based	*1.8*
81	2024	Infant Formula, Powder, Cow Milk-based	*1.4*
82	2024	Infant Formula, Powder, Soy-based	<LOD
85	2024	Infant Formula, Powder, Cow Milk-based	<LOD
86	2024	Infant Formula, Powder, Cow Milk-based	*1.4*
87	2024	Infant Formula, Powder, Cow Milk-based	<LOD
88	2024	Infant Formula, Powder, Soy-based	<LOD

89	2024	Infant Formula, Powder, Cow Milk-based	<LOD
90	2024	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
91	2024	Infant Formula, Powder, Cow Milk-based	*1.7*
92	2024	Infant Formula, Powder, Cow Milk-based	*1.3*
93	2024	Infant Formula, Powder, Cow Milk-based	*1.3*
94	2024	Infant Formula, Powder, Cow Milk-based	*1.2*
95	2024	Infant Formula, Powder, Cow Milk-based	<LOD
96	2024	Infant Formula, Powder, Soy-based	<LOD
97	2024	Infant Formula, Powder, Cow Milk-based	<LOD
98	2024	Infant Formula, Powder, Cow Milk-based	<LOD
99	2024	Infant Formula, Powder, Cow Milk-based	<LOD
100	2024	Infant Formula, Powder, Cow Milk-based	<LOD
101	2024	Infant Formula, Powder, Cow Milk-based	<LOD
102	2024	Infant Formula, Powder, Cow Milk-based	<LOD
103	2024	Infant Formula, Powder, Soy-based	<LOD
104	2024	Infant Formula, Powder, Cow Milk-based	<LOD
105	2024	Infant Formula, Powder, Cow Milk-based	<LOD
106	2024	Infant Formula, Ready-to-Feed Liquid, Soy-based	<LOD
107	2024	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
108	2024	Infant Formula, Powder, Cow Milk-based	<LOD
109	2024	Infant Formula, Powder, Cow Milk-based	<LOD
110	2024	Infant Formula, Powder, Cow Milk-based	<LOD
111	2024	Infant Formula, Powder, Soy-based	<LOD
112	2024	Infant Formula, Powder, Cow Milk-based	<LOD
113	2024	Infant Formula, Powder, Cow Milk-based	<LOD
114	2024	Infant Formula, Powder, Cow Milk-based	<LOD
115	2024	Infant Formula, Powder, Cow Milk-based	<LOD
116	2024	Infant Formula, Powder, Cow Milk-based	<LOD
117	2024	Infant Formula, Powder, Cow Milk-based	<LOD
120	2024	Infant Formula, Powder, Cow Milk-based	<LOD
121	2024	Infant Formula, Powder, Cow Milk-based	<LOD
122	2024	Infant Formula, Powder, Cow Milk-based	<LOD
123	2024	Infant Formula, Powder, Cow Milk-based	<LOD
124	2025	Infant Formula, Concentrated Liquid, Cow Milk-based	*0.3*
125	2025	Infant Formula, Concentrated Liquid, Cow Milk-based	*0.2*
126	2024	Infant Formula, Powder, Soy-based	<LOD
127	2024	Infant Formula, Powder, Soy-based	<LOD
128	2024	Infant Formula, Powder, Soy-based	<LOD
129	2024	Infant Formula, Powder, Soy-based	<LOD
130	2024	Infant Formula, Powder, Cow Milk-based	<LOD
131	2025	Infant Formula, Powder, Cow Milk-based	<LOD
132	2025	Infant Formula, Powder, Cow Milk-based	<LOD
133	2025	Infant Formula, Concentrated Liquid, Soy-based	<LOD
134	2025	Infant Formula, Ready-to-Feed Liquid, Soy-based	<LOD
135	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
136	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
137	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
138	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
139	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
140	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
141	2025	Infant Formula, Ready-to-Feed Liquid, Soy-based	<LOD
142	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
143	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
144	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
145	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
146	2025	Infant Formula, Concentrated Liquid, Cow Milk-based	<LOD
147	2025	Infant Formula, Powder, Cow Milk-based	<LOD
148	2025	Infant Formula, Powder, Cow Milk-based	<LOD
149	2025	Infant Formula, Powder, Cow Milk-based	<LOD
150	2025	Infant Formula, Powder, Cow Milk-based	<LOD
151	2025	Infant Formula, Powder, Soy-based	<LOD
152	2025	Infant Formula, Powder, Cow Milk-based	<LOD
154	2025	Infant Formula, Powder, Cow Milk-based	<LOD
155	2025	Infant Formula, Powder, Amino Acid-based	<LOD
157	2025	Infant Formula, Powder, Soy-based	<LOD
158	2025	Infant Formula, Powder, Cow Milk-based	<LOD
159	2025	Infant Formula, Powder, Cow Milk-based	<LOD
160	2025	Infant Formula, Powder, Cow Milk-based	<LOD
161	2025	Infant Formula, Powder, Cow Milk-based	<LOD
162	2025	Infant Formula, Powder, Soy-based	<LOD
163	2025	Infant Formula, Powder, Cow Milk-based	<LOD
164	2025	Infant Formula, Powder, Cow Milk-based	<LOD
165	2025	Infant Formula, Powder, Cow Milk-based	<LOD
166	2025	Infant Formula, Powder, Cow Milk-based	<LOD
167	2025	Infant Formula, Powder, Cow Milk-based	<LOD
168	2025	Infant Formula, Powder, Cow Milk-based	<LOD
170	2025	Infant Formula, Powder, Amino Acid-based	<LOD
171	2025	Infant Formula, Powder, Cow Milk-based	<LOD
172	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
173	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
174	2025	Infant Formula, Concentrated Liquid, Cow Milk-based	<LOD
175	2025	Infant Formula, Concentrated Liquid, Soy-based	<LOD
176	2025	Infant Formula, Concentrated Liquid, Soy-based	<LOD
177	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
178	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
179	2025	Infant Formula, Concentrated Liquid, Cow Milk-based	<LOD
180	2025	Infant Formula, Powder, Amino Acid-based	<LOD
181	2025	Infant Formula, Powder, Amino Acid-based	<LOD
182	2025	Infant Formula, Powder, Soy-based	<LOD

183	2025	Infant Formula, Powder, Cow Milk-based	<LOD
184	2025	Infant Formula, Powder, Cow Milk-based	<LOD
185	2025	Infant Formula, Powder, Cow Milk-based	<LOD
186	2025	Infant Formula, Powder, Cow Milk-based	<LOD
187	2025	Infant Formula, Powder, Cow Milk-based	<LOD
188	2025	Infant Formula, Powder, Cow Milk-based	<LOD
189	2025	Infant Formula, Powder, Cow Milk-based	<LOD
190	2025	Infant Formula, Powder, Cow Milk-based	*1.7*
191	2025	Infant Formula, Powder, Soy-based	<LOD
196	2025	Infant Formula, Powder, Amino Acid-based	<LOD
199	2025	Infant Formula, Powder, Cow Milk-based	<LOD
200	2025	Infant Formula, Powder, Cow Milk-based	<LOD
201	2025	Infant Formula, Powder, Soy-based	<LOD
202	2025	Infant Formula, Powder, Soy-based	<LOD
203	2025	Infant Formula, Powder, Soy-based	<LOD
204	2025	Infant Formula, Powder, Cow Milk-based	<LOD
205	2025	Infant Formula, Powder, Cow Milk-based	<LOD
206	2025	Infant Formula, Powder, Cow Milk-based	<LOD
207	2025	Infant Formula, Powder, Cow Milk-based	<LOD
208	2025	Infant Formula, Powder, Cow Milk-based	<LOD
209	2025	Infant Formula, Powder, Soy-based	<LOD
210	2025	Infant Formula, Powder, Cow Milk-based	<LOD
211	2025	Infant Formula, Powder, Cow Milk-based	<LOD
212	2025	Infant Formula, Powder, Cow Milk-based	<LOD
213	2025	Infant Formula, Powder, Cow Milk-based	<LOD
214	2025	Infant Formula, Powder, Cow Milk-based	*1.6*
215	2025	Infant Formula, Powder, Cow Milk-based	*1.6*
216	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
217	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
218	2025	Infant Formula, Concentrated Liquid, Cow Milk-based	<LOD
219	2025	Infant Formula, Concentrated Liquid, Cow Milk-based	<LOD
220	2025	Infant Formula, Concentrated Liquid, Cow Milk-based	<LOD
221	2025	Infant Formula, Ready-to-Feed Liquid, Cow Milk-based	<LOD
222	2025	Infant Formula, Powder, Cow Milk-based	<LOD
223	2025	Infant Formula, Powder, Cow Milk-based	<LOD
224	2025	Infant Formula, Powder, Cow Milk-based	<LOD
225	2025	Infant Formula, Powder, Cow Milk-based	<LOD
226	2025	Infant Formula, Powder, Cow Milk-based	<LOD
227	2025	Infant Formula, Powder, Cow Milk-based	<LOD
228	2025	Infant Formula, Powder, Cow Milk-based	<LOD
229	2025	Infant Formula, Powder, Amino Acid-based	<LOD
230	2025	Infant Formula, Powder, Amino Acid-based	<LOD
231	2025	Infant Formula, Powder, Soy-based	<LOD
232	2025	Infant Formula, Powder, Cow Milk-based	<LOD
234	2025	Infant Formula, Powder, Cow Milk-based	<LOD
235	2025	Infant Formula, Powder, Cow Milk-based	<LOD
236	2025	Infant Formula, Powder, Cow Milk-based	<LOD
237	2025	Infant Formula, Powder, Cow Milk-based	<LOD
238	2025	Infant Formula, Powder, Amino Acid-based	<LOD
239	2025	Infant Formula, Powder, Soy-based	<LOD
240	2025	Infant Formula, Powder, Cow Milk-based	<LOD
241	2025	Infant Formula, Powder, Amino Acid-based	<LOD
243	2025	Infant Formula, Powder, Soy-based	<LOD
244	2025	Infant Formula, Powder, Cow Milk-based	<LOD
245	2025	Infant Formula, Powder, Soy-based	<LOD
246	2025	Infant Formula, Powder, Cow Milk-based	<LOD
247	2025	Infant Formula, Powder, Cow Milk-based	<LOD
248	2025	Infant Formula, Powder, Cow Milk-based	<LOD
249	2025	Infant Formula, Powder, Cow Milk-based	<LOD
250	2025	Infant Formula, Powder, Soy-based	<LOD
251	2025	Infant Formula, Powder, Cow Milk-based	<LOD
252	2025	Infant Formula, Powder, Cow Milk-based	<LOD
253	2025	Infant Formula, Powder, Cow Milk-based	<LOD
254	2025	Infant Formula, Powder, Soy-based	<LOD
255	2025	Infant Formula, Powder, Cow Milk-based	<LOD
256	2025	Infant Formula, Powder, Cow Milk-based	<LOD
257	2025	Infant Formula, Powder, Cow Milk-based	<LOD
263	2025	Infant Formula, Powder, Cow Milk-based	<LOD
264	2025	Infant Formula, Powder, Amino Acid-based	<LOD
265	2025	Infant Formula, Powder, Soy-based	<LOD
266	2025	Infant Formula, Powder, Cow Milk-based	<LOD
267	2025	Infant Formula, Powder, Cow Milk-based	<LOD
268	2025	Infant Formula, Powder, Cow Milk-based	<LOD
269	2025	Infant Formula, Powder, Cow Milk-based	<LOD
270	2025	Infant Formula, Powder, Cow Milk-based	*1.6*
271	2025	Infant Formula, Powder, Cow Milk-based	*1.5*
272	2025	Infant Formula, Powder, Cow Milk-based	*1.3*
273	2025	Infant Formula, Powder, Cow Milk-based	<LOD
274	2025	Infant Formula, Powder, Cow Milk-based	<LOD
275	2025	Infant Formula, Powder, Cow Milk-based	<LOD
276	2025	Infant Formula, Powder, Cow Milk-based	<LOD
277	2025	Infant Formula, Powder, Cow Milk-based	<LOD
280	2025	Infant Formula, Powder, Soy-based	<LOD
281	2025	Infant Formula, Powder, Cow Milk-based	<LOD
282	2025	Infant Formula, Powder, Soy-based	<LOD
283	2025	Infant Formula, Powder, Cow Milk-based	<LOD
284	2025	Infant Formula, Powder, Cow Milk-based	<LOD
285	2025	Infant Formula, Powder, Cow Milk-based	<LOD
286	2025	Infant Formula, Powder, Cow Milk-based	<LOD

287	2025	Infant Formula, Powder, Cow Milk-based	<LOD
288	2025	Infant Formula, Powder, Cow Milk-based	<LOD
289	2025	Infant Formula, Powder, Cow Milk-based	<LOD
290	2025	Infant Formula, Powder, Cow Milk-based	<LOD
291	2025	Infant Formula, Powder, Cow Milk-based	<LOD
292	2025	Infant Formula, Powder, Cow Milk-based	<LOD
293	2025	Infant Formula, Powder, Cow Milk-based	<LOD
294	2025	Infant Formula, Powder, Cow Milk-based	<LOD
295	2025	Infant Formula, Powder, Cow Milk-based	<LOD
296	2025	Infant Formula, Powder, Cow Milk-based	<LOD
297	2025	Infant Formula, Powder, Cow Milk-based	<LOD
298	2025	Infant Formula, Powder, Cow Milk-based	<LOD
299	2025	Infant Formula, Powder, Cow Milk-based	<LOD
300	2025	Infant Formula, Powder, Cow Milk-based	<LOD
301	2025	Infant Formula, Powder, Cow Milk-based	<LOD
302	2025	Infant Formula, Powder, Cow Milk-based	<LOD
303	2025	Infant Formula, Powder, Cow Milk-based	<LOD
304	2025	Infant Formula, Powder, Cow Milk-based	<LOD
305	2025	Infant Formula, Powder, Cow Milk-based	<LOD
306	2025	Infant Formula, Powder, Cow Milk-based	<LOD
307	2025	Infant Formula, Powder, Cow Milk-based	<LOD
308	2025	Infant Formula, Powder, Cow Milk-based	<LOD
309	2025	Infant Formula, Powder, Cow Milk-based	<LOD
310	2025	Infant Formula, Powder, Cow Milk-based	<LOD
311	2025	Infant Formula, Powder, Cow Milk-based	*1.3*
312	2025	Infant Formula, Powder, Cow Milk-based	*1.4*
313	2025	Infant Formula, Powder, Cow Milk-based	<LOD
314	2025	Infant Formula, Powder, Cow Milk-based	<LOD
315	2025	Infant Formula, Powder, Cow Milk-based	<LOD
316	2025	Infant Formula, Powder, Cow Milk-based	<LOD
317	2025	Infant Formula, Powder, Cow Milk-based	<LOD
318	2025	Infant Formula, Powder, Cow Milk-based	<LOD
319	2025	Infant Formula, Powder, Cow Milk-based	<LOD
320	2025	Infant Formula, Powder, Soy-based	<LOD
321	2025	Infant Formula, Powder, Cow Milk-based	<LOD
322	2025	Infant Formula, Powder, Cow Milk-based	<LOD
328	2025	Infant Formula, Powder, Cow Milk-based	<LOD
329	2025	Infant Formula, Powder, Cow Milk-based	<LOD
330	2025	Infant Formula, Powder, Cow Milk-based	<LOD
331	2025	Infant Formula, Powder, Cow Milk-based	<LOD
332	2025	Infant Formula, Powder, Cow Milk-based	*1.5*
336	2025	Infant Formula, Powder, Cow Milk-based	<LOD
337	2025	Infant Formula, Powder, Soy-based	<LOD
338	2025	Infant Formula, Powder, Soy-based	<LOD
339	2025	Infant Formula, Powder, Cow Milk-based	<LOD
340	2025	Infant Formula, Powder, Soy-based	<LOD
341	2025	Infant Formula, Powder, Cow Milk-based	<LOD
342	2025	Infant Formula, Powder, Cow Milk-based	<LOD
343	2025	Infant Formula, Powder, Soy-based	<LOD
344	2025	Infant Formula, Powder, Soy-based	<LOD

[a] Results are analyzed and reported as sold in ppb (parts per billion).
[b] Thallium analyses were conducted using inductively coupled plasma mass spectrometry (ICP-MS) (https://www.fda.gov/media/87509/download). The Limit of Quantitation (LOQ) for the infant formula powder samples is 3.3 ppb; the Limit of Detection (LOD) is 1.1 ppb. The LOQ for both infant fomula ready-to-feed and concentrated liquids is 0.33 ppb, the LOD is 0.11. Results below the LOD are reported as <LOD. Trace values (those greater than the LOD and less than the LOQ) are reported in italics.

Infant formula samples were collected as part of a special survey that consisted of a total of 344 infant formulas and toddler drinks. Data from the toddler drinks will be made available following completion of ongoing testing conducted under the Closer to Zero initiative.