



January 16, 2020

Subject: 3M™ Mini Flip-Top Dilution Bottles

3M Customer:

You recently inquired about low fill volume in the 3M™ Mini Flip-Top Dilution Bottles.

We are upgrading equipment as part of our continuous improvement plans and reviewing our Mini Flip Top procedures with added focus on areas in the process that could introduce fill volume issues. This project is of high priority to our team, and current investigation includes:

- Cap seal design improvement to reduce leaking (ongoing process)
- Additional testing of each lot released to ensure fill volume is not an issue coming out of the plant
- Analysis of retain and complaint samples

The root cause of bottle leakage is the inversion of the box during shipping. Although the packaging indication that boxes should remain with the cap facing upwards, they can be jostled and be turned upside down. Leakage occurs at the cap area, as indicated by moisture at the top of the box.

It is recommended that once samples are received, that boxes remain in the indicated upright position. Please file a complaint for any leaking vials, and send samples (if available).

A plan is currently being discussed to test several different hypotheses once samples arrive for investigation. Once testing is complete we will update you on our results, root cause, and corrective actions.

Please feel free to contact me with any further questions on the matter.

Sincerely,

A handwritten signature in black ink that reads "Sarah Cleary". The signature is written in a cursive style and is positioned above a thin horizontal line.

Sarah Cleary | Advanced Quality Microbiologist  
Food Safety Department, Sample Handling, Cleantrace, MLS  
3M Center, Building 260-6B-01 | St. Paul, MN 55144  
Office: +1 651-737-8337  
[sacleary@mmm.com](mailto:sacleary@mmm.com)

**Food Safety Department**  
**3M Health Care Business**

3M Center, Bldg. 0275-05-W-05  
St. Paul, MN 55144-1000  
[www.3M.com/foodsafety](http://www.3M.com/foodsafety)