

Testing & Using Dewar / Evacuated Flasks

This should be done in a cool dry location.

1) **Wash Dewar.**

Inside of Dewar must be clean, dry, and free of any contaminates!

We recommend using a dish brush with hot soapy water and rinsing with Distilled or DI water. Avoid using Laboratory brushes that have metal handles. The metal may scratch the glass and weaken the Dewar.

2) **Temper / Chill Dewar.**

LN2 will boil rapidly till Dewar has been Tempered / Chilled.

Fill the Dewar $\frac{1}{2}$ to $\frac{3}{4}$ full with LN2 and cover.

After 30 to 45 seconds, pour out LN2 turning the Dewar to insure that all inside walls of the Dewar have been Tempered.

Repeat above steps until some frost is visible on inside of Dewar when it is empty.

Keep in mind that the Boiling Point for LN2 is **-320.5° F** and the Dewar is usually at room temperature, **72° to 73° F**.

3) **Refill Dewar and cover.**

Please note that LN2 will become contaminated with repeated use in testing Dewars that will cause rapid boiling, thus giving the impression that the Dewar is defective.

Signs of Defective Dewar

- 1) Frost, not condensation, will appear on outside of Dewar.
- 2) Bottom of Dewar, Tar, will be cold to Touch.
- 3) Excessive Rapid boiling from the bottom of the Dewar continues after Tempering.
- 4) Boiling on the top edge or side could indicate the wall of the Dewar is contaminated.

WARNING ! VACUUM FLASK – CAN SHATTER UNEXPECTEDLY, MAY CAUSE INJURY. WEAR SAFETY GLASSES AND, FOR BEST PROTECTION, GLOVES, LONG SLEEVES AND APRON.