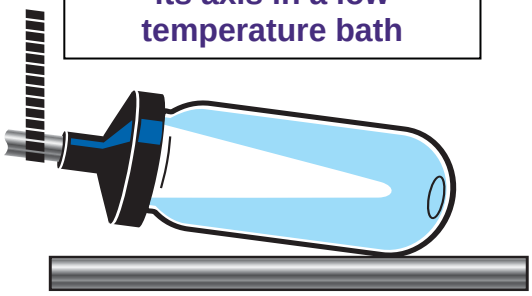
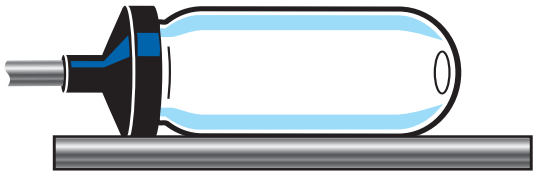
WHY SHELL FREEZING IS IMPORTANT

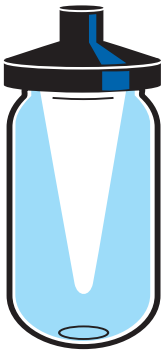
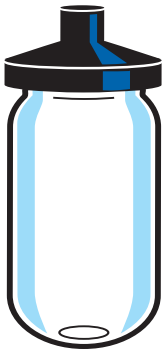
If product is frozen in a flask in a "static" condition the surface area exposed to low pressure is minimized and freeze drying is extended in duration

VirTis Shell Bath rotates a product container on its axis in a low temperature bath



Larger volume of product slightly elevated for shell freezing in a Shell Bath



Smaller volume of product allows flask to be spun on its access by the bath without elevation.

The same volume when frozen on its axis has a much larger surface area exposed to the low pressure of the freeze dryer and lyophilization rates are enhanced