

Apparatus for Vacuum Assisted Powder/Suspension Filling of Capillaries or Tubes

A conical tube (or any tube with a smaller diameter and larger diameter ends) with a porous frit in the tip (smaller diameter end) with an internal capillary/tube (plastic, glass, etc. tubing) inserted into the conical tube which makes contact with the porous frit and the inner diameter of the conical tube and extends outside and past the end of the larger diameter end of the capillary (See Figure 1). This apparatus/assembly when inserted tip end into any vacuum port small enough to form contact/seal with the outside of the conical tube will allow the inner capillary to pull vacuum. This apparatus which may be disposable or re-useable will allow the internal capillary to be more easily filled with powders, slurries, suspensions, etc. than by traditional techniques of filling capillaries/tubing with solid or solid containing materials. The inner capillary/tube when filled (full or partial filled) with powder (or suspension, etc.) can then be removed and sealed on one or both ends to retain the material. The filled capillary or tube can then be used for variety of purposes such as analysis by X-ray Powder Diffraction, or other useful purposes or analyses.

Figure 1

