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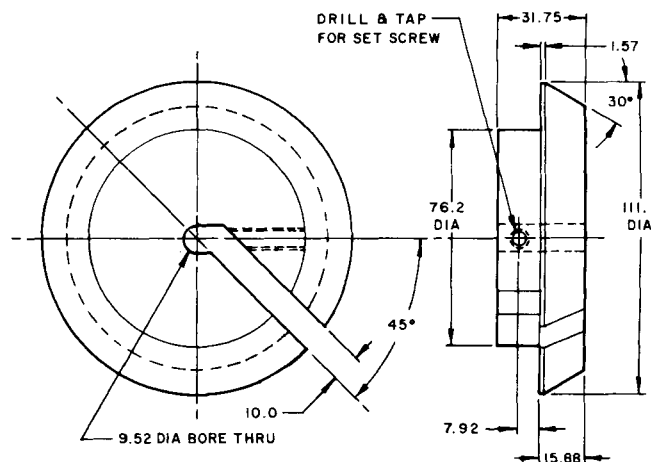


Figure 1—Dissolution vessel centering tool. The material used was plexiglass and all measurements are in millimeters.

Centering Tool for Dissolution Vessels

Keyphrases □ Drug dissolution—testing, centering tool for dissolution vessels □ Centering tool—drug dissolution testing, for basket and paddle methods

To the Editor:

Proper alignment and standardization of equipment is essential to obtain reliable results in drug dissolution testing. The USP XX requires that the shaft in both the basket and paddle methods be positioned so that its axis is not >0.2 cm at any point from the vertical axis of the vessel (1). A centering tool for alignment of the shaft was previously described (2), and several centering tools are commercially available^{1,2}. We have designed a centering tool which has been widely used in FDA laboratories and which we believe offers significant advantages over other designs.

The tool is machined from a block of plexiglass (Fig. 1). The sides of the tool are tapered at an angle of 30° from the axis so that the tool can be used with plastic or glass dissolution vessels or to align the base plates that support the dissolution vessels. The main slot is oversized to 10 mm to allow the tool to be used with 9.52-mm diameter shafts.

The center portion of the slot is offset 45° from the main slot, so that the shaft can be accurately butted against the radius of the 9.50-mm center hole with a 6.35-mm screw. Securing the shaft against the center hole radius prevents the tool from accidental tipping when aligning the vessels. The final machining of the tapered edge is done with the device secured by its set screw to an arbor to ensure that the center hole and the tapered portion of the tool will be concentric.

While in use, the tool is slipped down the shaft into the mouth of the vessel, and the vessel is aligned with the tool after tightening the set screw. The design offers these advantages:

1. Locking the tool to the shaft prevents the alignment from changing while adjusting the kettle.
2. The circular design aligns the kettle's total circumference in one operation.
3. Dimension of the tool permits it to be used to align the base plate.

With proper use, most, if not all, of the centering tools previously described should be capable of aligning the shaft within USP specifications.

(1) "The United States Pharmacopeia," 20th rev. United States Pharmacopeial Convention, Rockville, Md., 1980, p. 959.

(2) D. C. Cox, C. C. Douglas, W. B. Furman, R. D. Kirchhoefer, J. W. Myrick, and C. E. Wells., *Pharm. Tech.*, 2, 41 (1978).

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