

Simplified Handling of Multiple Extraction Samples

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INTERNATIONAL bottle shaking machines (International Equipment Co., Boston, Mass.) are in common laboratory use for liquid-liquid extractions, for extracting materials from paper chromatograms, for extracting materials from biological tissues, and for a variety of other purposes. Whether drilled wooden blocks or other means are used to increase the sample capacity for a given shaking interval, there is an inordinate amount of sample handling when many samples are used. To obviate this problem, one can mount support rods on the shaking machine head, which will support a portable turntable from a fraction collector. This simple expedient allows personnel in this laboratory to transport 60 samples in 40-ml. glass-stoppered centrifuge tubes to (and from) the shaker in one operation.

The three support bars on the shaker head are of $\frac{3}{4}$ -in. diameter aluminum and are bolted upright to the shaker head at equidistant points. The top of each rod has been tapped so that a $\frac{1}{4}$ -20 threaded rod projects $\frac{7}{16}$ in. from its surface. The turntable rests on these supports and is held in place with butterfly nuts while shaking.

The portable turntables used are available for the model T fraction collector (Instrumentation Specialties Co., Lincoln, Nebr.). Other removable turntables may work as well. The rods which serve as spacers for the upper and lower plates of the turntable have been replaced with a $\frac{1}{4}$ -20 threaded rod and are extended up to allow the top cover plate (a $\frac{3}{32}$ -in. thick stainless steel disk not supplied with the turntable) to be bolted quickly into place with six butterfly nuts. (Threaded rod and appropriate spacers are readily available from Small Parts, Miami, Fla.) The underside of this top cover plate has two concentric rows of $\frac{3}{4}$ -in. diameter sponge rubber disks glued to the plate. These are arranged so that each will compress one of the flat-head glass stoppers when the top cover plate is anchored.

These disks readily are punched out of commercially available kneeling pads.

It might be noted that the model T turntable is most advantageous for this purpose because the lower plate of the turntable has a hollow disk center. Not only does this allow the advertised portability, but it also allows better anchoring to the support bars on the shaker head. Both of these features are shown in Figs. 1 and 2.

This shaker modification can be put to greatest use where an automatic dispensing device such as that described elsewhere (1) can be utilized with two or more turntables.



Fig. 1.—Turntable in place on fraction collector.



Fig. 2.—Turntable in place on shaker.

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REFERENCE

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