IN THE LABORATORY

On the Use of the Campbell-Pressman Lyophilizing Apparatus for Urinary Extractives

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In a recent publication, Friedgood, *et al.* (*2*) described the use of the Campbell-Pressman (*1*) apparatus for the concentration and preservation of urinary substances by lyophilization. We have used this apparatus with an adaptor and a special flask (Fig. 1) for the evaporation,

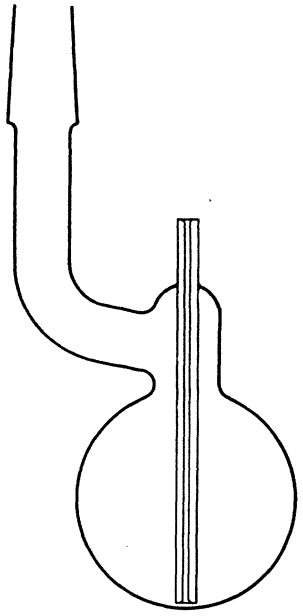

FIG. 1. Diagram of the Claisen-type flask used with the lyophil apparatus. A variety of sizes, ranging in capacity from 250 ml to 1 liter, have been found suitable. This flask is attached to one of the joints of the apparatus by a short, angular adaptor bearing the corresponding ground joint at either end. The adaptor maintains the vertical position of the flask.

at room temperature or below, of urinary extracts, e.g. *n*-butyl alcohol extracts as encountered in the method of Talbot (*3*). This flask is filled from the neck. Bumping is effectively controlled by admitting a small amount of air (or other gas) through the sealed-in capillary tube, the flow being regulated by means of thermometer tubing or other fine capillary attached with rubber tubing to the flask capillary. Further control may be provided by a screw clamp on the rubber tubing. During such evaporation a receiver for distillate is placed on the bottom joint of the apparatus, since liquid may drop down as solid accumulates on the condenser cone.

In the use of the lyophil apparatus with small flasks or tubes to remove organic solvents from mixtures such as those resulting from the acetylation of steroids, we noted a tendency for some light, flaky material to be carried up into the condenser section. To catch this material, we used glass wool, inserted into the mouth of the flask. It is possible that coarse glass cloth on a platinum wire ring would be preferable, since the tuft of glass wool sometimes loosens and is carried over.

We have also found the apparatus useful for the removal of water from the mixture remaining after enzymic hydrolysis of small amounts of steroid glucuronides, preparatory to extraction with organic solvents.

Finally, it should be noted that care must be exercised to remove lubricating grease from the joints before further processing of the sample.

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References

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In Vivo Geiger-Müller Gamma-Ray Counter for Radioisotope Distribution Studies

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One of the important applications of radioisotopes to biological research is the *in vivo* detection of the distribution of atomic species within an organism with respect to both space and time. This has usually been done by placing an ordinary Geiger-Müller tube on the surface of the organism and observing the counting rate following the administration of a radioisotope. The technic of *in vivo* radioisotope study was apparently first used by Blumgart and Yens (*1*), and there has followed the development of special counter tubes for the purpose. For

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