

NOTE.

Extraction Apparatus.—For the extraction of a substance by means of a mixture of solvents (*e. g.*, 50 per cent. alcohol), distillation and the use of a reflux condenser being inadmissible, I have devised a form of apparatus shown in the accompanying diagram. It consists of a glass tube 4×12 cm. terminating at the bottom in an outside siphon tube $9\frac{1}{2}$ cm. long, the upper bend of which has a short open "riser" fitted with a short piece of rubber tubing. A support for the extraction cartridge may be made by cutting off a section about 3 cm. long from the open end of a wide test-tube and indenting its edges.

This support having been inserted, the extraction cartridge with contents is introduced and then the mixed solvent. After standing a sufficient time, the solvent is drained off by clamping the rubber tube attached to the "riser," closing the large tube with a stopper bearing an open glass tube, and forcing air through the latter. The large tube having been drained, the solvent in the extraction cartridge is allowed to drain into the space below it and the siphon again started. In this way, *all* of the solvent can be removed before the second portion is introduced.

Advantages.—(1) There is no stopcock (as in separatory funnels) which may leak or require contaminating grease under the penalty of possible sticking. (2) The siphon action, being under control, makes possible the complete draining of the apparatus between successive extractions and also prevents the undesirable premature draining of the apparatus such as sometimes occurs when the siphon tube becomes filled with a broken column of liquid or when too much solvent is unintentionally introduced and the siphon action thereby started. (3) The apparatus can be stoppered easily and evaporation, with subsequent variation in the proportion of the solvents, prevented.



R. P. NOBLE.