A CONVENIENT KETENE GENERATOR

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A simple apparatus for the preparation of ketene \((\text{CH}_2=\text{C}=\text{O})\) from acetone vapor is described by Ott, Schröter, and Packendorff (1). A more rigid and convenient apparatus has been designed and used by the writer (Fig. 1). Pyrex glass used in both the filament-support and bulb reduces the possibility of cracking or breaking. The removable filament-support makes it possible to replace the filament in a few moments. By turning up the ends of the 30 mill tungsten leads sealed into the glass, one may wind on the platinuim or tungsten wire and thus rapidly replace the filament.

Platinum wire (Brown and Sharpe gauge No. 30) across a 110 volt circuit gives satisfactory results. A resistance in series with the lamp regulated to let 2 to 6 amperes through the filament results in a rapid evolution of ketene. After 8 to 12 hours continuous use there is a carbonaceous deposit on the filament. This deposit, being extremely brittle, may be removed by drawing the platinum filament over any sharp edge. The wire is then ready to be used again. A duplicate support and filament may be constructed which will be ready to replace the one in use if it burns out or breaks.

REFERENCE

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Fig. 1

Ground glass joint
Filament support
Tungsten leads
Filament

Acetone vapor
to reflux condenser

Scale - cm.