ferricyanide reaction. They are much less effective reagents than Duponol.

Ferricyanide, iodine and iodoaceticacidamide all react with the SH groups of simple SH compounds like cysteine, which is a constituent of egg albumin. Ferricyanide, although it reacts with denatured egg albumin, does not react with native egg albumin.[5] Iodine and iodoaceticacidamide, nevertheless, do react with native egg albumin. 10 mg of native egg albumin treated with 1 cc of 0.0015 N iodine at pH 3.2 and then neutralized and denatured by Duponol, no longer reduces dilute ferricyanide. 10 mg of native albumin treated with 0.01 mM of iodoaceticacidamide at pH 9 and then denatured reduces only half as much ferricyanide as untreated albumin.

In connection with the observation that native egg albumin reacts with iodoaceticacidamide but not with ferricyanide, it is interesting to note that urease is inactivated by iodoaceticacidamide[9] but not by ferricyanide.[10] The effect of iodoaceticacidamide on viruses is now being tested.

The fact that ferricyanide does not react with native egg albumin does not prove that the SH groups of native egg albumin are linked or inaccessible. On the other hand, it can not be assumed, without independent evidence, that in the present experiments ferricyanide, iodine and iodoaceticacidamide are reacting only with SH groups. All three of these reagents can, under suitable conditions, react with protein groups other than SH groups. It is possible, furthermore, that there are reducing groups in denatured egg albumin which are not SH groups but which are oxidized by dilute ferricyanide only in the presence of SH groups.

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

AN IMPROVED TYPE OF KETENE GENERATOR

RECENTLY Herriott[1] described a ketene generator which was improvised from that previously suggested by Ott, Schroter and Packendorf.[2] In our studies of the acetylation of pituitary hormones we have developed a new design of generator, giving a more efficient and workable apparatus. A diagram is given in Fig. 1.

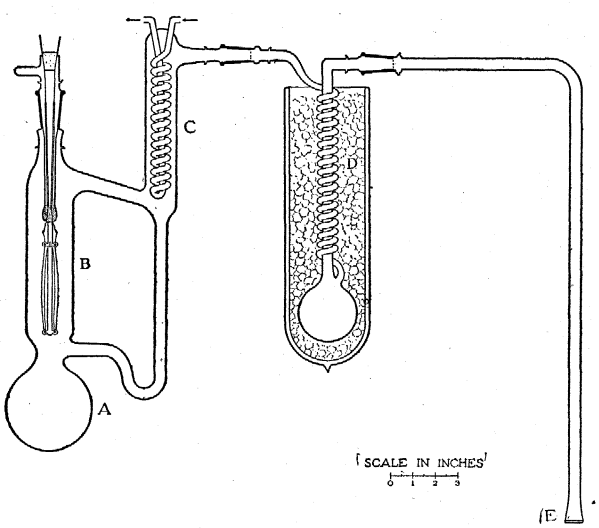

FIG. 1

Vaporized acetone from flask A is decomposed by the heating filament B, which is kept at a bright-red heat. The mixed vapors pass through the condenser C in order to remove the unchanged acetone vapor and most of the ketene polymers. More complete removal of these two substances is then effected by the trap D, which is immersed in a freezing mixture of salt and ice. Ketene then passes into the solution through a sintered glass plate E. The sintered glass plate is particularly useful for bubbling gas; it gives more effective contact between the solution and the gas, and it stirs the solution sufficiently to make unnecessary a mechanical stirrer as generally suggested.

The removable filament-support is the same as described by Herriott. The 40 mill tungsten leads are sealed permanently into the glass and the replaceable tungsten filament (15 mill) may be attached to them in the manner illustrated in the figure. The rate at which ketene is generated can be controlled by varying the current which passes through the heating filament.

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A SIMPLE AND EFFICIENT PRECIPITATE DRYER

IN the course of preparing enzymes, protein was precipitated with ammonium sulfate at 70 per cent. saturation. The filtered, wet precipitate contained a large amount of mother liquor. If the precipitate was allowed to dry on the filter paper more than half its dry weight would be salt and not the active material desired. Drying first on blotting paper and then on a porous plate was tried. By this method all the water was absorbed; but as it began to evaporate,

[1] R. M. Herriott, *Jour. Gen. Physiol.*, 18: 69, 1934.
[2] E. Ott, R. Schroter and K. Packendorf, *Jour. Prakt. Chem.*, 130, N.S.: 177, 1931.
[9] C. V. Smythe, *Jour. Biol. Chem.*, 114: 601, 1936.
[10] L. Hellerman and M. E. Perkins, *Jour. Biol. Chem.*, 107: 241, 1934.