Although there is a high degree of variability in virus assay methods, it appears that the infectivity of the trypsin purified protein is as great or greater than that of the controls. The virus protein after treatment with trypsin had been precipitated by ammonium sulfate at pH 4.5–5.0, filtered on Celite, and recrystallized three times by Stanley's procedure,[6] using CaO for elution, and acetic acid in ammonium sulfate for crystallization. It is probable that this subsequent treatment freed the preparation of trypsin, which either has only a temporary inactivating effect,[5] or acts on cells of inoculated plants so as to prevent entry of virus into living cells, when it is still present in the inoculum.[7]

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CATALYTIC REDUCTION OF THE METHYL ESTER OF 2:3:4-TRIACETYL α-METHYL-GALACTURONIDE TO METHYL-GALACTOSIDE

IN a recent note[1] there was described the reduction of methyl ester of 2:3:4-trimethyl α-methyl-d-galacturonide to 2:3:4-trimethyl α-methyl-d-galactoside. We now wish to report on the reduction of the methyl ester of 2:3:4-triacetyl α-methyl-galacturonide to methyl-d-galactoside. Thus, in one step, reduction of the $-COOCH_3$ and deacetylation are accomplished.

The composition of the methylgalactoside was as follows: C 43.51, H 7.4, OCH_3 16.91 (for $C_7H_{14}O_6$ Calc. C 43.30, H 7.3, OCH_3 15.98).

The application of this method to the study of aldobionic acids and other uronic acid derivatives is in progress.

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

A METHOD FOR THE SECTIONING OF PROTOZOA EN MASSE

OF the methods commonly used for sectioning protozoa *en masse,* those of Sharp[1] (imbedding in a hard paraffin mold), Calkins[2] (entanglement in zooglea) and Belar[3] (glass tubing closed at one end by bolting cloth) are no doubt the most practicable. In an attempt to reduce the loss of specimens, the present method of imbedding in a bag made of mammalian mesentery was devised. I have used the method successfully in sectioning several lots of large endocommensal ciliates, and an account of the procedure may be useful to others.

To make a form over which the bag may be shaped, roll a bit of warmed hard paraffin of such size that a sphere 2 mm in diameter results; while still warm impale it on the end of a round wooden toothpick or on a wooden pin, pointed at both ends, about 5 cm long and 0.6 mm in diameter near the ends.

Excise a transparent piece of fresh mesentery (cat or rabbit) 1.5 cm in diameter, transfer it to a dish filled with warm salt solution to a depth of 7 cm and, after rinsing, dip it out with the paraffin head of the pin so that it hangs symmetrically over the head. Stick the pin head-upright into a piece of sheet cork and tie with fine, black, cotton thread (No. 80) an overhand knot securely around both mesentery and pin just below the head. Handling the pin by its cork base, plunge it head first into a deep dish of Bouin's fluid and shake it about head-downward in the fixative; the free edge of the bag can thus be made to stand out nearly at right angles to the pin and to harden in this position. Leave it immersed head-downward for 24 hours, allowing the cork to serve as a float.

Remove the pin from the cork, wash in 80 per cent. alcohol as usual, dehydrate and transfer to xylene for four hours to dissolve out the paraffin interior of the bag. Reimmerse in absolute alcohol, transfer to 80 per cent. for a day and with forceps push the bag off the pin. There results a tough, fairly rigid, thin-walled bag for receiving the protozoa; it has an opening equal to the diameter of the pin and has a draw string in place; it may be stored in alcohol until needed.

To get the fixed protozoa into the bag, transfer them to a watch glass of 80 per cent. alcohol. Make a small basket or low cylinder of fine-mesh wire gauze just large enough to receive the bag, immerse the basket completely in a watch glass of 95 per cent. alcohol and set the bag into the basket with its opening uppermost. With a pipette having a straight, slender tip about 2 cm long, transfer the protozoa to the bag under the dissecting binocular. They need merely to be released from the pipette directly above and near to the opening in the bag; they will drop or stream into it because of the greater specific gravity of the 80 per cent. alcohol. The process should not be

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[7] W. M. Stanley, *Phytopath.*, 24: 1055, 1934.
[1] R. G. Sharp, *Univ. Calif. Publ. Zool.*, 13: 43, 1914.
[2] G. N. Calkins, *Jour. Exp. Zool.*, 27: 293, 1919.
[3] K. Belar, *Methodik der Wiss. Biol.*, 1: 735, 1928.
[1] SCIENCE, 86: 2232, 332, October 8, 1937.