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The Digestion of Pectin and Methylated Glucoses by Various Organisms

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A solid medium on which yeasts grow vigorously.

Malt extract (Difco).....	15 g.
K ₂ HPO ₄	3 g.
NH ₄ Cl	1 g.
Agar	20 g.

(Amount of agar to be used, optional)

Medium adjusted with citric acid to pH 5.4-5.6.

IOWA STATE COLLEGE,
AMES, IOWA.

THE DIGESTION OF PECTIN AND METHYLATED GLUCOSES BY VARIOUS ORGANISMS

HAROLD W. COLES

3-monomethyl glucose (I), 1, 2, 3, 5-tetramethyl glucose (II), and 1, 2, 3, 5, 6-pentamethyl glucose (III) were prepared, and, together with pectin, tried out on 185 cultures including organisms isolated from the activated sludge of creamery wastes and members of the colon-typhoid group. A peptone medium was used and a synthetic medium containing no peptone and hence no carbon other than the carbon of the pectin or carbohydrates. The organisms digesting pectin and (I) with the production of acid and gas were those commonly associated with the soil. (II) and (III) were not digested by any of the organisms tried. Conclusions based upon these results were discussed.

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THE ADAPTATION AND MODIFICATION OF *RHIZOBIUM LEGUMINOSARUM* TO CERTAIN ADVERSE CONDITIONS

L. A. BURKEY

A study was made of the effects of desiccation and alkalinity on the growth of the alfalfa root nodule bacteria. A similar study was reported, on the effects of gentian violet, in a previous paper (Burke & Burkey, Soil Science, 1925). In this paper it was shown that continued exposure of the organisms to the dye resulted in more resistance, which was only temporary. Later work has shown the formation of bacteroid forms when the alfalfa organism is grown on dye agar or on medium which is very acid or extremely alkaline.