

EXPERIMENTS TO BE PERFORMED BY B. ROTMAN IN DR. BRITTON CHANCE 'S LABORATORY
AT PHILADELPHIA

Purpose:

To test the hypothesis that the reduced beta-galactosidase activity of intact cells of E. Coli is due to inhibition of the enzyme by the reaction products. The hypothesis predicts that the enzymatic activity of the intact cells will be larger when measured at initial time because of the absence of reaction products.

Method:

About 10 liters of cells of W1317 will be grown in mineral medium. For handling purposes the culture will be centrifuged down and will be resuspended in a few hundred ml of the same medium. Such suspension will be kept at low temperatures and will be carried as such to Philadelphia. Before the experiment the suspension will be washed with buffer and will be resuspended with buffer. The suspension will be then mixed with ONPG in a rapid flow-double beam apparatus and the appearance of the yellow color will be recorded after one millisecond or less. As a control a benzene treated culture will be run in the same fashion. The blank in each case will be cells treated or untreated mixed with buffer without ONPG.

Madison, October 26, 1955