

ACCUMULATION IN CPM (Experiments 261-264-265-266-269)

|   | GAL <sub>1</sub>   | GAL <sub>2</sub> | GAL <sub>3</sub><br>(Trypt.) | GAL <sub>4</sub> | GAL <sub>5</sub><br>(Trypt.) | GAL <sub>6</sub> | GAL <sub>7</sub> | GAL <sub>8</sub> | GAL <sub>9</sub><br>(Trypt.) | GAL <sub>16</sub> |
|---|--|------------------|------------------------------|------------------|------------------------------|------------------|------------------|------------------|------------------------------|-------------------|
| <u>Galactose Accumulation:</u> (Duplicate values correspond to different exp.)  |  |                  |                              |                  |                              |                  |                  |                  |                              |                   |
| Non-Induced   | 559-616  | 252-273          | 1952                         | 436              | 3820                         | 480              | 56               | 113              | 186                          | 7227              |
| Gal Induced   | 4193-3998  | 456-462          | 3657                         | 3121             | 2907                         | 3121             | 142              | 507              | 579                          |                   |
| <u><math>\beta</math>-Methyl-Galactoside Accumulation:</u> (Accumulation in W2244 = 1200 CPM, in W3110 Gal <sup>+</sup> = 340 CPM)                                |  |                  |                              |                  |                              |                  |                  |                  |                              |                   |
| Non-Induced   | 15-0   | 17-25            | 126                          | 0                | 110                          | 0                | 0                | 15               | 37                           | 266               |
| Gal Induced   | 1517-3823  | 548-305          | 654                          | 660              | 223                          | 374              | 140              | 345              | 341                          |                   |
| <u><math>\beta</math>-Galactosidase in Induced Cells:</u> (OD <sub>420</sub> (Beckman) x 100/min; ml culture)<br>Enzyme in non-induced wild K <sub>12</sub> = 0.3 |  |                  |                              |                  |                              |                  |                  |                  |                              |                   |
| C <sub>6</sub> H <sub>6</sub> activated cells   |  |                  |                              |                  |                              |                  |                  |                  |                              |                   |
| At 10 <sup>-3</sup> M OMPG  | 40.3   | 63.7             | 5.1                          | 17.7             | 0.1                          | 11.6             | 27.8             | 74               | 57.3                         |                   |
| Crypticity Factor   | $\left( \frac{\beta\text{-galactosidase in C}_6\text{H}_6\text{-cells}}{\beta\text{-galactosidase in intact cells}} \right)$ |                  |                              |                  |                              |                  |                  |                  |                              |                   |
|   | 13   | 13               | 20                           | 13               | 1.6                          | 12               | 12               | 15               | 13                           |                   |

Cells were grown in Davis' media with 0.4% glycerol. Induced cells were grown in the same medium plus 0.1% galactose for 12 hours. Accumulation assay: 0.8 mg cells in 3 ml medium incubated for 15 min at 37° with 50  $\mu$ g/ml chloramphenicol. Substrate at  $1 \times 10^{-5}$  M (CPM/ml = 3900). Accumulations of less than 20 CPM are probably not significant. Accumulation of  $\beta$ -Methyl-Galactoside in induced cells with large amounts of  $\beta$ -Galactosidase is meaningless because of hydrolysis.