

1. galactose - P: Specific for ~~galactosides~~; contra arabinoside galactosides
Not inhibited by this compo.

3. galactoside - P. (MG-P). β megal. gal? probably yes
(galactose inhibits MG).
iPr; Pr < Et < Me Et gal much less than Me, α -gal not at all.

2. galactoside - P monop. $\left. \begin{matrix} \beta\text{-thiogal} \\ \beta\text{-gal} \\ \alpha\text{-gal.} \end{matrix} \right\}$ gal probably not
lactose.

3 - assay difficult for lactose, maybe irrelevant.

2 vs. 3 : lac₃⁻ } ~~β -galactosidase must not be present.~~

Not induced : { galactose consumed
MB accumm.
glucose-glycerol cells : { TMG not accumm.

Induction : (any gal, galactoside; TMG also induces TMG accumulation).

Mutants:

galactose
all so far are permease-positive. Gal-permease always present.

Glucose always accumulates. Even lac_3 : glu is accumulated. (but Cohn says glucose may inhibit gal^+ of glucose permease).
in lac_3 .

	CONST.	MG-IND. (presumably)
W3092. (kinase^-)	Gal P^+	P^{++} TMG P induced.
	MG P^-	P^+
	TMG $-$	TMG $^+$ ← inhibited by alkyl galactosides.

Gal₁ - Gal₉.

Gal₂ Gal₈: MG permease-negative also 2 others? are these kinase^-

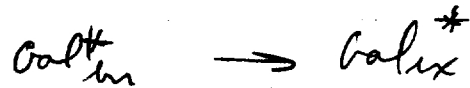
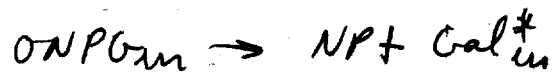
Cells: D(gly) - gal₁₄... Inc. 15 minutes. Filter Millipore & washing. Washing removes many counts. Control other kinds of cells, e.g. azide . These backgrounds are rather high.

600	80	unw.
200	6	w.
exp.	93ide	

Exit reaction. ONP.Gal^{*}; β galactosidase ^{presumed} excess;

Gal^{*} → exit, at high ONPG, consequence hydrolysis rate, and Gal^{*} will accumulate until $V_{in} = V_{ex}$. Gal^{*} itself outside very low. Separate permeases permease.

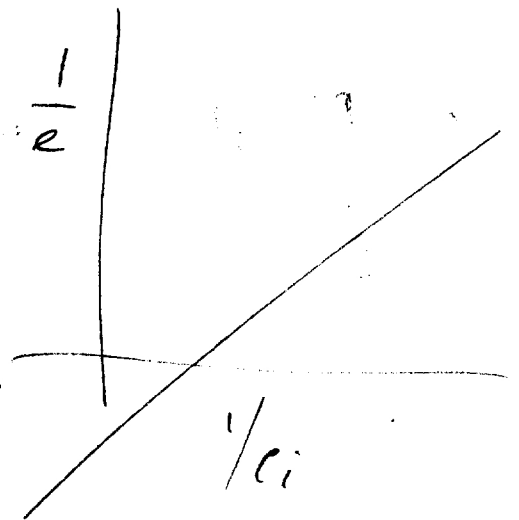
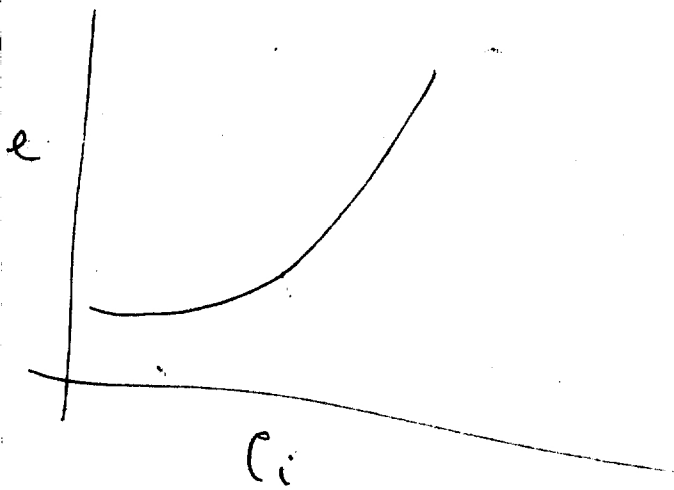
Thus



at steady state

$$\dot{c}_i = k_1 y - k_2 c_i = 0$$

$$c_i = k_3 y$$



$$e \neq K c_i$$

$$\text{th } e = \frac{K_1 c_i}{K_2 - c_i}$$

Study exit reaction.

Azide: no effect on rate of NPG hydrolysis but stops accumulation. \therefore must affect exit reaction.

" Penicillin is a shaped hole, facilitated diffusion is rigid relaxes the structure, and faster exit. "

Induce cells with