

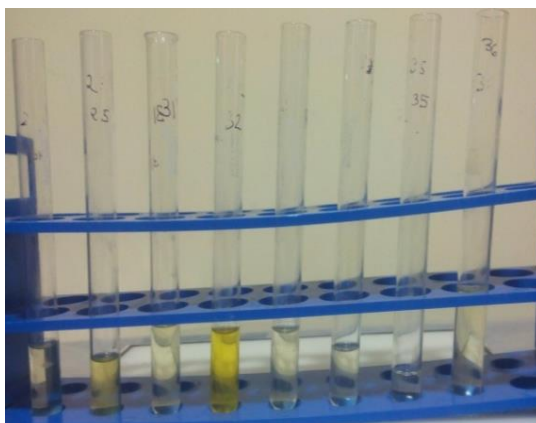


Figure 1. Qualitative assay of β -galactosidase enzyme

Table 1: Quantitative assay of β -galactosidase enzyme

Culture No	β -galactosidase enzyme Units/mL of crude enzyme
DPE -1	0.0
DPE -2	5.8
DPE -3	13.9
DPE -4	7.5
DPE -5	24.8

Table 2: Effect of pH on β -galactosidase enzyme activity

pH	β -galactosidase enzyme Units / mL	
	DPE -3	DPE -5
pH – 4	1.0	156.2
pH – 7	2.9	67.3
pH – 9	0.2	0.00

Table 3: Effect of temperature on β -galactosidase enzyme activity

Temperature	β -galactosidase enzyme activity	
	DPE -3	DPE -5
30 °C	0.00	71.6
37 °C	19.3	120.8
42 °C	0.00	9.6

Table 4: Effect of carbon source on β -galactosidase enzyme activity

Carbon source	β -galactosidase enzyme Units / mL	
	DPE -3	DPE -5
Glucose	0.00	9.5
Sucrose	0.00	9.5
Starch	6.4	12.7

Table 5: Effect of nitrogen source on β -galactosidase enzyme activity

Nitrogen source	β -galactosidase enzyme Units / mL	
	DPE -3	DPE -5
Peptone	0.16	6.33
Beef extract	0.127	9.49
Ammonium sulfate	0.22	12.99

Table 6: Effect of inducers on β -galactosidase enzyme activity

Inducer	β -galactosidase enzyme Units / mL	
	DPE -3	DPE -5
Skim milk	8.4	27.0
IPTG	7.2	3.5