

# ENZYMES

BY

# SORACHIM

## Glucose Oxidase from Aspergillus sp.

### GLO-202A

#### SPECIFICATIONS

Name	$\beta$ -D-Glucose:oxygen 1-oxydoreductase
EC	1.1.3.4
Appearance	Yellowish amorphous powder lyophilized
Activity	Grade II, 250 U/mg-solid or more 1 unit oxidizes 1 $\mu$ mole of $\beta$ -D-glucose to D-gluconolactone and $H_2O_2$ per minute at pH 7.0 at 25 °C
Contaminants	Catalase $\leq$ 0.05 %, Amylase $\leq$ 0.05 %, Maltase $\leq$ 0.05 % Saccharase $\leq$ 0.5 %
Stability	Stable at -20°C for at least 12 months
Molecular weight	approx. 153,000
Inhibitors	p-Chloromercuribenzoate, heavy metal ions ( $Cu^{2+}$ , $Hg^{2+}$ , $Ag^+$ )

E  
N  
Z  
Y  
M  
E  
S

SUBSTRATE SPECIFICITY	
SUBSTRATE	RELATIVE ACTIVITY
$\beta$ -D-Glucose	100 %
D (+) Galactose	0.25 %
Maltose	0.35 %
D (+) Mannose	1.45 %

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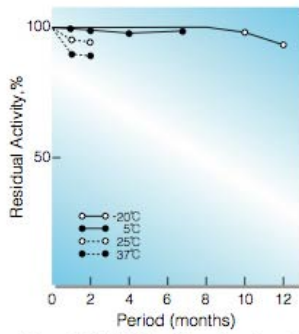


Fig.1. Stability (Powder form)  
[ kept under dry conditions ]

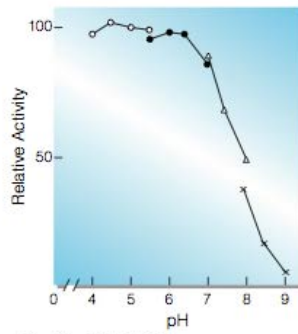


Fig.2. pH-Activity  
[ 37°C, 5min-reaction in 79mM buffer  
solution : ○—○, acetate; ●—●  
MES; △—△, BES; ×—×, BICINE ]

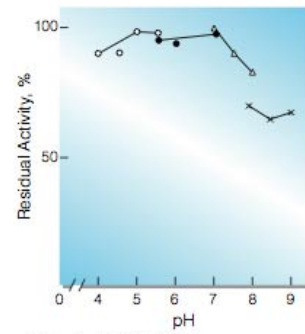


Fig.4. pH-Stability  
[ 30°C, 20hr-treatment with 0.1M buffer  
solution : ○—○, acetate; ●—●  
MES; △—△, BES; ×—×, BICINE ]

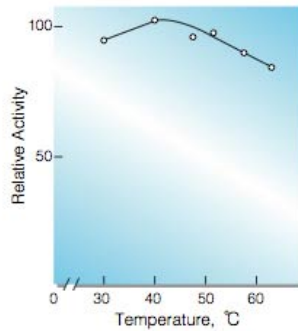


Fig.3. Temperature activity  
[ 5min-reaction in 79mM MES buffer, pH5.7 ]

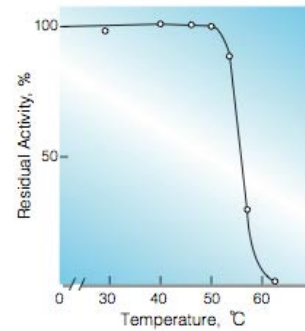


Fig.5. Thermal stability  
[ 1hr-treatment in 79mM MES buffer, pH5.7 ]