NOMENCLATURE :

A	Frequency factor	
C^*	Equilibrium d.o. concentration	$m.moles.l^{-1}$
C_l	D.O. concentration in bulk liquid	$m.moles.l^{-1}$
D_t	Diameter of vessel	m
d_r	Diameter of impeller	m
E	Energy of activation	$KJ.mole^{-1}$
g	Accleration due to gravity	$cm.sec^{-2}$
H	Hight of liquid	m
I_a	Armature current	mA
I_o	Armature current in no load	mA
I_b	Field current	mA
K	Fluid consistancy factor	$dynes.sec.cm^{-2}$
K_La	Volumetric mass transfer coefficient	min^{-1}
K_s	Saturation constant	$g.l^{-1}$
K_v	Gas phase oxygen transfer rate	$m.moles\ .l^{-1}.h^{-1}$
K_{vp}	Gas phase oxygen transfer rate under pressure	$m.moles.l^{-1}.h^{-1}.atm^{-1}$
N_{ReI}	Reynolds number	dimensionless
Na	Aeration number	dimensionless
N_{sc}	Sherwood number	dimensionless
n	Flow behavior index	
N	Rpm of agitator	min^{-1}
OTR	Oxygen transfer rate	$m.moles\ .l^{-1}.h^{-1}$
P / V	Power per unit volume	$w\ .\ l^{-1}$
Q	Air flow rate	$cm^3.sec^{-1}$
R_{ac}	Armature resistance (cold)	ohms

R	Universal gas constant	$Kcal.mole^{-1}.{}^{o}k^{-1}$
S	Substrate concentration	$g.l^{-1}$
t	Temperature	^{o}C
T	Temperature	^{o}K
V_s	Superfacial gas velocity	$m.h^{-1}$
V_{tip}	Tip velocity of impeller	$m.s^{-1}$
V_a	Armature voltage	V
V_f	Field voltage	V
μ	Specific growth rate	h^{-1}
μ_a	Apparant viscosity	Cp
α	Temperature coefficient	$m\ .{}^{o}C^{-1}$
β	Emperical constant	
ρ	Density	$Kg\ .m^{-3}$
τ	Shear force	dynes
ν	Shear rate	sec^{-1}