

LAB JOURNAL - Version 2.0

Experiment No. : LBN 26 Aim : To develop product equivalent to reference product
Equipment Details : Glass RBF with stirrer set up
Reaction Scheme : Safety Precautions :

Input Raw Material

Sr.No	Raw Material	Sources	Cas No.	RM No	Quantity gms	Purity	Rm %	Molecular Wt.	No. of Moles	Molar Ratio
1	Vicaspin LUB 1010 (R225100845) Bu- EO-PO HV-62.3/ MW-900	Viswaat			194.0			900	0.22	1.0
2	P2O5	Commercial			9.578				0.067	0.3
3	Epomine SP-018	Nippon			33.2	100				
4	Butyl acrylate				75.7	100		128.2	0.59	
5	Step- B reaction mass (20%)				48.9					
6	Step- A product				132.2					

Experimental Procedure

Sr.No	Time hrs	Temperature °C	Pressure/Vacuum-N2	Process Steps	Remarks
1	1-2	50-55	N2	Step- A To main reactor added Vicaspin LUB 1010 (R225100845) Bu- EO-PO HV-62.3/ MW-900 under stirring and nitrogen atmosphere temp. 40 deg increased temp slowly with addition of P2O5	clear mass
2	1-2 / 0.25	50-55 / 65-70	N2	Step-B To main reactor added Epomine SP-018- reaction mass held with slow addition of Butyl acrylate, checked free acid at interval	AV-46.9, free acid 0.4
3	1	55-60	N2	Step-C To main reactor added Step- B reaction mass (20%) and Step- A product, mixed till uniform	AV 42.5 Amine 30.4

Optimized Reaction Conditions: Temperature c: 65-70 | N2/Vac: N2 | Time: 4h

Critical Process Parameter

Sr No	Source	Time	Temp	Observation Details
1	Step-A	1-2	55	clear mass

Critical Parameters

S.no	Parameter	Reference	Value
1	av	43.2	42.5
2	aminev	30.1	30.4

SPDu :
Conclusion: