

LAB JOURNAL - Version 2.0

Experiment No.	Lab Batch 25 A
Aim	To develop product equivalent to reference product

Equipment Details	Laboratory glass reactor set up with agitator / nitrogen system etc.
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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	Sun Surfol R-1400-	FOIL			100	100				
2	PPA:	FOIL			1.071	100				
3	P- Pentoxide	FOIL			1.98	100				
4	Epomine 018-				150	100				
5	2- ethyl hexyl acrylate	Loba			349	100				
Total										

Experimental Procedure					
Sr.No	Time(hrs)	Temperature - (°C)	Pressure/Vacuum - N2(kg/cm2)	Process Steps	Remarks
1	1-5	65-75	Yes	Step- A To main reactor added Sun Surfol R-1400 under stirring and nitrogen atmosphere temp. 60 deg increased temp slowly with addition of PPA- 1.071 gm followed by P- Pentaoxide- 1.98 g. Upon feed completion temp raised to 75 deg C and digested for 2-3 hrs. Appearance was clear non yellowish . Upon digestion cooled to RT. AV-45.75	
2	1-8	77-81	Yes	Step-B To main reactor added Epomine 018- reaction mass under stirring and nitrogen atmosphere temp. 78 deg Started slowly addition of 2- ethyl hexyl acrylate slowly . initially found clear reaction mass , later on changed to yellowish in nature. Built viscosity at end of reaction. Reaction monitored with IV analysis. (IV-34)	AV- 0.2 / Amine -255 /IV-34
3	1-5	55-58	Yes	Step-C To main reactor added Step- B reaction mass (20%) - 20 greaction mass under stirring and nitrogen atmosphere temp. 55 deg Started slowly addition of Step- A (80%)- 80 greaction mass in it. initially found clear reaction mass , yellowish in nature with viscosity. Mixed for 3 hrs then cooled to RT. AV-37.69	Flow able yellowish liquid. AV-37.69 Amine-40.72
Optimized Reaction Conditions					
Temperature (c)			N2/Vac		Time

Critical Process Parameter				
Sr No.	Source	Time	Temp	Observation Details

Critical Parameters			
S.no	Parameter	Reference	Value
1	aminev	30.1	40.7
2	av	43.2	36.86

SPDu	
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Conclusion
Product was Yellowish brownish flow able liquid/ Violet23/Blue/Red 53:1, 48:2,146,57:1/ Orange/ Yellow/ Black/ white all properties good while green -violet 27 having strength resolubility weak

