

LAB JOURNAL - Version 2.0

Experiment No.	Lab Batch 23
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			1010	100				
2	P-Pentaoxide	FOIL			47.16	100				
3	Epomine 018-				90	100				
4	2- ethyl hexyl acrylate				210	100				
Total										

Experimental Procedure					
Sr.No	Time(hrs)	Temperature - (°C)	Pressure/Vacuum - N2(kg/cm2)	Process Steps	Remarks
1	1-5	65-85	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 P-Pentaoxide. 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-50	
2	1-8	55-80	Yes	Step-B To main reactor added Epomine 018- reaction mass under stirring and nitrogen atmosphere temp. 75 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.	AV-1.1/ Amine 256 /IV-37.2
3	1-5	60-65	Yes	Step-C To main reactor added Step- B reaction mass (20%) - reaction mass under stirring and nitrogen atmosphere temp. 55 deg Started slowly addition of Step- A (80%)reaction mass in it. initially found clear reaction mass , yellowish in nature with viscosity. Mixed for 3 hrs then cooled to RT.	Flow able yellowish liquid. AV-42.67/amine-39.8/HV-55.32 /SAP-63.5/IV-7.22

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	39.8
2	av	43.2	42.67

SPDu	
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Conclusion
Product was Yellowish brownish flow able liquid/ Strength/gloss for C black good/ Resolubility issue i) With 3% MPA solvent and ii) without solvent

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