

Lab Batch 24C (I)

LAB JOURNAL - Version 2.0	
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Experiment No.	Lab Batch 24 C (I)
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			450	100				
2	P-Pentaoxide	FOIL			22.95	100				
3	Epomine 018-				90	100				
4	2- ethyl hexyl acrylate	Loba			210	100				
Total										

Experimental Procedure					
Sr.No	Time(hrs)	Temperature - (°C)	Pressure/Va cuum - 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 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. (180 gm ester + 37.3 g Butanol EO-PO) AV-39.8	
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-34.5)	IV-34.5
3	1-5	55-58	Yes	Step-C To main reactor added Step- B reaction mass (15%) -30 g reaction mass under stirring and nitrogen atmosphere temp. 55 deg Started slowly addition of Step- A (85%)- 170 gm reaction mass in it. initially found clear reaction mass , yellowish in nature with viscosity. Mixed for 3 hrs then cooled to RT. AV-35.56	Flow able yellowish liquid. AV-34.05 Amine-35.17

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	35.17
2	av	43.2	34.05

SPDu	
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Conclusion
Product was Yellowish brownish flow able liquid

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