

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2000
 DateRun: 01/11/2000
 Experimenters: Marina Gayl, Bill Griffin, Jason Marshall
 ClientType: TUR Agency
 ProjectNumber: Project #2
 Substrates: Liquid
 PartType: Part
 Contaminants: Buffing/Polishing Compounds, Metal fines
 Cleaning Methods: Ultrasonics
 Analytical Methods: Colorimeter

Purpose: To determine a method for separating the buffing compound and the cleaning solution.

Experimental Procedure: Twelve centrifuge tubes were filled with 10 mL of one of the cleaning/contaminant solutions. The tubes were placed into a Fisher Centrifug[®] Centrifuge, Model 225 and run for varying time periods and speeds settings. Table 1 lists the times and speeds used. After each time period, one tube was analyzed for %Transmittance using a LaMotte's Smart Colorimeter at 605 nm.

Table 1. Centrifuge Operating Conditions

Contaminant	Time	Speed	%T
1	0	0	58
1	5	1/4	68
1	5	1/2	72
1	5	3/4	74
1	10	3/4	75
1	30	3/4	79
2	0	0	72
2	30	3/4	85

SUBSTRATE MATERIAL: Liquid
 CONTAMINANTS: Iron Oxide (buffing compound) 1-Coarse, 2-Fine
 CONTAMINATING PROCESS USED: Received contaminated
 CLEANING METHOD: Centrifuge separation of Fe₂O₃ from cleaning solution.

Results:

Summary:

Substrates:	Liquid				
Contaminants:	Buffing/Polishing Compounds, Metal fines				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Colgate-Palmolive Company	Palmolive Dish Soap			<input type="checkbox"/>	

Conclusion:

The centrifuge was able to separate out the iron oxide from the solution. It appears that the speed of the centrifuge and the time both have an impact on separating the oxide.