# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2000

DateRun: 01/10/2000

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 Centrific® 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 | | 0.00 | ☐ | |

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.