CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 12/01/2004

Experimenters: Jason Marshall

ClientType: General

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Oil, Starch

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate successful alternatives at a higher temperature.

Experimental Procedure: Four products were selected based on test results from the previous trial. Each product was diluted with DI water to vendor suggested concentration. The products were then heated to 160 F on a hot plate.

Twelve of the pre-contaminated stainless steel coupons were cleaned, three coupons per product for 15 minutes using stir bar agitation. Cleaning was followed by a 15 second rinse in a tap water bath at 120 F and air blow off for 30 seconds at room temperature. Once dry, coupons were weighed a third time and efficiencies were calculated for each product tested.

Results: Three of the four products were all more effective at the higher temperature for the same cleaning time (15 minutes). Only the Ecco Commercial cleaner had a lower efficiency than cleaning at 130 F. (A difference of 7%). Two of the products removed over 75% of the oil/starch mix. The table below lists the amount of soil added, the amount remaining and the percent removed for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
VPW SC 1000	0.1596	0.0875	45.18
	0.0611	0.0386	36.82
	0.1829	0.0715	60.91
Ecco Commercial	0.0793	0.0567	28.50
	0.0834	0.0134	83.93
	0.0866	0.0334	61.43
Organic Cleaner/ Degreaser	0.0945	0.0130	86.24
	0.1665	0.0138	91.71
	0.0547	0.0091	83.36
Super H2O2	0.0716	0.0226	68.44
	0.1511	0.0257	82.99
	0.0794	0.0191	75.94

Summary:

Substrates:	Stainless Steel
Contaminants:	Oil, Starch

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Orison Marketing	VPW SC 1000	20	47.64	☐	
1st Envirosafety Inc. - No Longer Exists	Ecco Commercial Cleaner - For Comparison Purposes Only	25	57.95	☐	
1st Envirosafety Inc. - No Longer Exists	Organic Cleaner/Degreaser - For Comparison Purposes Only	25	87.11	☑	
Cleanline Products	H2O2 Super Citrus Concentrate	10	75.79	☑	

Conclusion: All four products will be cleaned for an additional 15 minutes (30 minutes total). All other conditions will be kept the same.