

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008  
 DateRun: 06/26/2008  
 Experimenters: Jason Marshall, Shweta Bansal  
 ClientType: Tool Manufacturer  
 ProjectNumber: Project #1  
 Substrates: Steel  
 PartType: Coupon  
 Contaminants: Metal fines  
 Cleaning Methods: Ultrasonics  
 Analytical Methods: Visual

Purpose: To evaluate top products at two concentrations and an elevated temperature.

Experimental Procedure: The top five products were selected from the previous lab trial. Products were diluted to 5% using DI water in 300 ml glass beakers. Water also was used. Solutions were heated to 130 F. The beakers were immersed in a water bath in a Branson 40 kHz ultrasonic tank. Products were degassed for five minutes. A set of three soiled steel parts (with metal grit/fines) were immersed into each product and cleaned for 5 minutes using ultrasonic agitation. Following cleaning, coupons were observed for cleanliness.

Results: As in the previous trial Daraclean 282 GF cleaned parts at both 5 and 10% dilutions at 130 F were visually the cleanest. At 5%, Polyspray Jet 790xs was the next cleanest followed by M Aero. At 10% these two products were reversed with M Aero having cleaning parts than 790xs.

Product	5 Min Rank	10 Min Rank
Micro 90	5	5
790xs	2	3
282 GF	1	1
M6310	4	4
M Aero	3	2
Water	6	6

Summary:

<b>Substrates:</b>	Steel				
<b>Contaminants:</b>	Metal fines				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
International Products Corporation	Micro 90 Conc.	5		<input type="checkbox"/>	
US Polychem Corporation	Polyspray Jet 790 XS	5		<input checked="" type="checkbox"/>	
Magnaflux	Daraclean 282 GF	5		<input checked="" type="checkbox"/>	
Kyzen Corporation	Metalnox M6310 (For Comparison Only)	5		<input type="checkbox"/>	
Church & Dwight Co Inc.	Armakleen M Aero	5		<input checked="" type="checkbox"/>	
Water	Water	100		<input type="checkbox"/>	

Conclusion: Heating the cleaning products yielded the cleanest parts. In each of the trials, Daraclean 282 GF yielded the cleanest parts for the metal grit removal. Photos of parts are included below for 5 and 10% cleaning at 130F.