

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004  
DateRun: 03/12/2004  
Experimenters: Dave Hout  
ClientType: Lab  
ProjectNumber: Project #1  
Substrates: Stainless Steel  
PartType: Coupon  
Contaminants: Oil  
Cleaning Methods: Immersion/Soak  
Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. One product was used at full strength and seven products were heated to 130 F on a hot plate. Twenty-four preweighed coupons were coated with Oil-Benecyn B-5186 (64742-5, 9003-29-6, 3964-69-2, 63197-48-8) and allowed to dry for a half an hour and reweighed. Three coupons were cleaned in each solution for 5 minutes using stir-bar-agitation, rinsed in a tap water bath for 15 seconds at 120 F and dried using air blow off for 30 seconds at 68 F. Coupons were allowed to dry for a half an hour and then reweighed a final time. Efficiencies were calculated.

Results:

Summary:

|                              |                               |               |                    |                                     |                      |
|------------------------------|-------------------------------|---------------|--------------------|-------------------------------------|----------------------|
| <b>Substrates:</b>           | Stainless Steel               |               |                    |                                     |                      |
| <b>Contaminants:</b>         | Oil                           |               |                    |                                     |                      |
| <b>Company Name:</b>         | <b>Product Name:</b>          | <b>Conc.:</b> | <b>Efficiency:</b> | <b>Effective:</b>                   | <b>Observations:</b> |
| Dow Chemical Company         | XUS 40571 Development Solvent | 100           | 94.62              | <input checked="" type="checkbox"/> |                      |
| Calgon Corporation           | Geo Guard 3015                | 5             | 90.70              | <input checked="" type="checkbox"/> |                      |
| Watson Technical Associates  | Watson Formula 9000           | 5             | 97.77              | <input checked="" type="checkbox"/> |                      |
| SOQ Environmental Technology | Ecomate FN                    | 5             | 94.77              | <input checked="" type="checkbox"/> |                      |
| US Polychem Corporation      | Polychem A 2000 P             | 5             | 96.10              | <input checked="" type="checkbox"/> |                      |
| Buckeye International        | XL 100 Cleaner & Degreaser    | 5             | 98.56              | <input checked="" type="checkbox"/> |                      |
| Jet Lube Inc                 | Jet Lube 5000                 | 5             | 97.82              | <input checked="" type="checkbox"/> |                      |
| Quaker Chemical              | Formula 625 XL                | 5             | 99.04              | <input checked="" type="checkbox"/> |                      |

Conclusion: All products were effective at removing the contaminant at an efficiency rate >90%