

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003

DateRun: 11/21/2003

Experimenters: Dave Hout

ClientType: Lab

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Lubricating/Lapping Oils

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. Six products were heated to 130 F on a hot plate and two products were used at full strength. Twenty four preweighed coupons were coated with Lubricant Houghton MTC-53 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:

| Substrates: | | Stainless Steel | | | |
|--------------------------------|---------------------------|--------------------------|-------------|-------------------------------------|---------------|
| Contaminants: | | Lubricating/Lapping Oils | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Chemtronics Inc | Super Bio Wash | 100 | 105.28 | <input type="checkbox"/> | |
| BCS Company | 251 SR | 58 | 102.35 | <input checked="" type="checkbox"/> | |
| Calgon Corporation | Geo Guard 3015 | 5 | 99.17 | <input checked="" type="checkbox"/> | |
| Buckeye International | Work Out | 5 | 103.99 | <input type="checkbox"/> | |
| Delta Omega Technologies Ltd | Attar D(R3) | 5 | 101.14 | <input checked="" type="checkbox"/> | |
| Equinox Products | Natural Solutions | 5 | 102.71 | <input checked="" type="checkbox"/> | |
| Chemkleen International Inc. | CT 1 Multipurpose Cleaner | 5 | 102.39 | <input checked="" type="checkbox"/> | |
| BetzDearborne Laboratories Inc | Custom Clean N CC 2278 | 100 | 87.50 | <input checked="" type="checkbox"/> | |

Conclusion: All products were effective at an efficiency rate of over 87%. Two products removed over 93% and were considered ineffective due to compatibility.