

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002

DateRun: 02/06/2002

Experimenters: Purav Dave

ClientType: Lab

ProjectNumber: Project #1

Substrates: Aluminum, Stainless Steel

PartType: Coupon

Contaminants: Greases, Lubricating/Lapping Oils

Cleaning Methods: Mechanical Agitation

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.  
Cleaning: 5 min. immersion cleaning with air sparger as an agitation medium at 120 F.  
Rinsing: 1/2 min. manual with water at 120 F.  
Drying :1 min. with heat gun at 500 F.  
Contaminant:  
1. Grease: keystone KSL-111.ELF Lubricant, Diester based Grease  
2. Lubricant - ITW Devkon Safetap stick, grinding lubricant, contains TSRK 80100221-5000P, TSRK 80100221-5001P, TSRK 80100221-5002P

## Results:

### Summary:

| <b>Substrates:</b>          |                     | Aluminum, Stainless Steel         |             |                                     |  |
|-----------------------------|---------------------|-----------------------------------|-------------|-------------------------------------|--|
| <b>Contaminants:</b>        |                     | Greases, Lubricating/Lapping Oils |             |                                     |  |
| Company Name:               | Product Name:       | Conc.:                            | Efficiency: | Effective:                          | Observations:                                    |
| Oakite Products             | Citradet            | 5                                 | 81.67       | <input type="checkbox"/>            | Contaminant: Grease, Substrate : stainless steel |
| Oakite Products             | Inproclean 2500     | 5                                 | 85.00       | <input checked="" type="checkbox"/> | Contaminant: Grease, Substrate : stainless steel |
| Watson Technical Associates | Watson Formula 7300 | 5                                 | 82.15       | <input type="checkbox"/>            | Contaminant: Grease, Substrate : stainless steel |
| JDI Inc                     | Mirachem 500 RTU    | 5                                 | 69.37       | <input type="checkbox"/>            | Contaminant: Lubricant, Substrate : Aluminium    |
| Hubbard Hall Inc            | Aquasonic 201       | 5                                 | 93.64       | <input checked="" type="checkbox"/> | Contaminant: Lubricant, Substrate : Aluminium    |
| Magnum Research Corporation | Aluminum Aerowash   | 5                                 | 99.43       | <input checked="" type="checkbox"/> | Contaminant: Lubricant, Substrate : Aluminium    |

Conclusion: 1st 3 evaluations are for comparing stir-bar agitation with air sparger. It was found that first two evaluations, the results were almost comparable but in the third one with Watson formula 7300, air sparger was more affective, about 12% more efficiency.