

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003

DateRun: 03/27/2003

Experimenters: Heidi Wilcox

ClientType: Lab

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Waxes

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.  
Cleaning: 5 min Immersion cleaning with stir-bar agitation @ 120 F  
Rinsing: 1/2 min, manual, in 102 F water (tap)  
Drying: 1 min with heat gun @ 500F  
Contaminant: Beeswax

Results: Using immersion cleaning for five minutes resulted in four products removing all the beeswax, one removed 99% and the last product removed 85%.

Summary:

|                          |                                       |                 |                    |                                     |                      |  |
|--------------------------|---------------------------------------|-----------------|--------------------|-------------------------------------|----------------------|--|
| <b>Substrates:</b>       |                                       | Stainless Steel |                    |                                     |                      |  |
| <b>Contaminants:</b>     |                                       | Waxes           |                    |                                     |                      |  |
| <b>Company Name:</b>     | <b>Product Name:</b>                  | <b>Conc.:</b>   | <b>Efficiency:</b> | <b>Effective:</b>                   | <b>Observations:</b> |  |
| Florida Chemical Company | Citrus Burst 7                        | 100             | 100.75             | <input checked="" type="checkbox"/> |                      |  |
| Florida Chemical Company | D-Limonene                            | 100             | 99.10              | <input checked="" type="checkbox"/> |                      |  |
| Vertec BioSolvents       | VertecBio Gold Unscented Part Cleaner | 100             | 85.10              | <input checked="" type="checkbox"/> |                      |  |
| Pentone Corporation      | Citrikleen XPC                        | 100             | 100.07             | <input checked="" type="checkbox"/> |                      |  |
| Inland Technologies Inc  | Citrasafe                             | 100             | 100.37             | <input checked="" type="checkbox"/> |                      |  |
| EcoLink                  | Vortex                                | 100             | 100.44             | <input checked="" type="checkbox"/> |                      |  |

Conclusion: All products evaluated were found to be effective at removing the beeswax.