

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:

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|--------------------------|---------------------------------------|-----------------|--------------------|-------------------------------------|----------------------|--|
| Substrates: | | Stainless Steel | | | | |
| Contaminants: | | Waxes | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: | |
| 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.