

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003

DateRun: 04/10/2003

Experimenters: Jason Marshall

ClientType: Lab

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Inks

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: Cerdec magenta Ink CAS# 119-64-2, 65997-18-4, 1345-24-0, 20667-12-3

## Results:

### Summary:

| <b>Substrates:</b>                | Stainless Steel                       |        |             |                                     |               |
|-----------------------------------|---------------------------------------|--------|-------------|-------------------------------------|---------------|
| <b>Contaminants:</b>              | Inks                                  |        |             |                                     |               |
| Company Name:                     | Product Name:                         | Conc.: | Efficiency: | Effective:                          | Observations: |
| Florida Chemical Company          | Citrus Burst 7                        | 100    | 34.96       | <input type="checkbox"/>            |               |
| Florida Chemical Company          | D-Limonene                            | 100    | 52.79       | <input type="checkbox"/>            |               |
| Brulin Corporation                | Nature Sol 100                        | 100    | 97.90       | <input checked="" type="checkbox"/> |               |
| Twin Rivers Technologies          | Methyl Ester 1618                     | 100    | 7.49        | <input type="checkbox"/>            |               |
| AG Environmental Products         | Canola Gold CE110                     | 100    | -50.58      | <input type="checkbox"/>            |               |
| AG Environmental Products         | Soy Gold 1000                         | 100    | -56.64      | <input type="checkbox"/>            |               |
| AG Environmental Products         | Soy Gold 2000                         | 100    | 4.97        | <input type="checkbox"/>            |               |
| AG Environmental Products         | Soy Clear 1500                        | 100    | 96.76       | <input checked="" type="checkbox"/> |               |
| United Laboratories International | United 2002 Harvest Gold              | 100    | -31.45      | <input type="checkbox"/>            |               |
| Vertec BioSolvents                | VertecBio Gold Unscented Part Cleaner | 100    | -59.38      | <input type="checkbox"/>            |               |
| EcoLink                           | Vortex                                | 100    | 39.23       | <input type="checkbox"/>            |               |
| Finger Lakes Chemical             | 2-22 D Limonene Industrial Cleaner    | 100    | -54.97      | <input type="checkbox"/>            |               |

Conclusion: Many coupons look as if they would be significantly cleaned with just wipe. The ink has been softened, lifted or dissolved to enhance removal. See trial 236A for follow-up.