# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009

DateRun: 04/09/2009

Experimenters: Junhee Cho, Smith Gadd

ClientType: General

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Calcium/lime, Food

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To continue testing alternative cleaners for dairy processing equipment

Experimental Procedure: Five products were selected based on past testing results matching client supplied information. Three products were used at full strength and two were diluted to 5% using DI water in 400 ml beakers and heated to 120 F on a hot plate.

Peweighed stainless coupons were coated with the whole sweet milk contaminant using a squeeze bulb. The contaminant covered coupons were put in an oven at 130F and dried for 15 minutes. Once dry, the coupons were weighed a second time to determine the amount of milk applied.

Three coupons were sprayed with cleaning products and then cleaned with manual wiping. Rinsing was not needed and coupons were air dried. Final weights were recorded and efficiencies were calculated for each coupon cleaned.

Results:

| Cleaner | Initial wt | Final wt | % Removed |
|---|---|---|---|
| SC 2000 All Purpose | 0.1565 | 0.0115 | 92.65 |
| | 0.2435 | 0.0829 | 65.95 |
| | 0.0627 | 0.0043 | 93.14 |
| Bean-e-doo | 0.1432 | 0.0922 | 35.61 |
| | 0.0453 | 0.0267 | 41.06 |
| | 0.1304 | 0.0871 | 33.21 |
| Soy Gold 1000 | 0.1865 | 0.1555 | 16.62 |
| | 0.2390 | 0.2016 | 15.65 |
| | 0.1861 | 0.1455 | 21.82 |
| Polyspray Jet 790 XS | 0.2466 | 0.0247 | 89.98 |
| | 0.0757 | 0.0088 | 88.38 |
| | 0.1863 | 0.0023 | 98.77 |
| Sea Wash 77 | 0.1160 | -0.0001 | 100.09 |
| | 0.1085 | 0.0069 | 93.64 |
| | 0.1174 | 0.0024 | 97.96 |

Summary:

| **Substrates:** | Stainless Steel |
|---|---|
| **Contaminants:** | Calcium/lime, Food |

| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
|---|---|---|---|---|---|
| Gemtek Products | SC 2000 All Purpose | 100 | 83.92 | ☐ | |
| Franmar Chemical | Bean-e-doo (Parts Washer Solvent) | 100 | 36.63 | ☐ | |
| AG Environmental Products | Soy Gold 2000 | 100 | 18.03 | ☐ | |
| US Polychem Corporation | Polyspray Jet 790 XS | 5 | 92.37 | ☑ | |
| Warren Chemical Company | Sea Wash 77 | 5 | 97.23 | ☑ | |

Conclusion: The two diluted product removed more than 90% of the whole sweet milk using manual wiping.