

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003
 DateRun: 03/10/2003
 Experimenters: Jason Marshall
 ClientType: Metal
 ProjectNumber: Project #1
 Substrates: Glass/Quartz, Other
 PartType: Coupon
 Contaminants: Dirt
 Cleaning Methods: Ultrasonics
 Analytical Methods:

Purpose: To generate a list of products that have been evaluated successfully in the lab under similar conditions

Experimental Procedure: Using the supplied information from the Database Search form, two lists of products were created. The first list contains products that have been used in the lab for glass cleaning. The contaminants and equipment may not match the supplied information. The second list contains products recommended by vendors. The products match the specified information from the search form.

Results: Table lists laboratory tested products based on glass substrates.

Table 1. Manual Cleaning of Glass for various soils

| Soil: Dirt | | |
|----------------------------------|---------------------------------|-----------------------------------|
| Substrate: Glass | | |
| Equipment: Manual or Ultrasonics | | |
| Value | CompanyName | ProductName |
| 48 | Innovative Organics Inc | Amberclean L 12 |
| 47 | Chemtronics | Super Bio Wash |
| 47 | ITW Fluid Products Group | AccuClean |
| 46 | Rochester Midland | EnviroCare Washroom Cleaner |
| 45 | Church & Dwight | Armaklean M Aero |
| 45 | Church & Dwight | Armakleen M Auto |
| 45 | Rochester Midland | Glass Cleaner |
| 45 | Rochester Midland | Tough Job |
| 41 | CRC Industries | HydroForce Butyl Free All Purpose |
| 41 | Permatex Industrial Corporation | Natural Blue |
| 39 | Abatement Technology | Bio Might 100 |
| 39 | Vertec BioSolvents | VertecBio Gold 2 |
| 38 | Cleaning Systems | Release |
| 37 | SWR Corporation | SWR One |
| 36 | Tech Spray | Concentrated Aqueous Defluxer |
| 34 | Bio Chem Systems | Bio T Foam Plus |

Additional Data

| Company | Product | Classification | Contaminant | Contaminant | Equipment | Substrate | Efficiency |
|---------------------------|-------------------|----------------|-------------|---|-------------|-----------|------------|
| AG Environmental Products | Canola Gold CE110 | Ester | Waxes | Wax - Roger Reed 98033 Wax, Hydrocarbon waxes | Manual Wipe | Glass | |

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|--------------------------------|-------------------------------------|----------------------|-------|--|-------------|-------|-------|
| Bio Chem Systems | Bio T 200 A | Terpene | Waxes | Wax - Roger Reed 98033 Wax, Hydrocarbon waxes | Manual Wipe | Glass | |
| Cleanline Products | Super H2O2 Citrus Concentrate | Semi-Aqueous | Soaps | Soaps - SSL Soil 2 Glass (Colgate Regular shaving cream 5.3%, Arid Extra Extra Spray Deodorant 3.5%, Suave Naturals Flexible Hold hair spray 3.7%, Aleeda Texurizing hair gel 25.6% Colgate Total toothpaste 10.4%, Water 51.5%) | Manual Wipe | Glass | 99.17 |
| Cogent Environmental Solutions | Ecogent General All Purpose Cleaner | Acidic Aqueous | Soaps | Soaps - SSL Soil 2 Glass (Colgate Regular shaving cream 5.3%, Arid Extra Extra Spray Deodorant 3.5%, Suave Naturals Flexible Hold hair spray 3.7%, Aleeda Texurizing hair gel 25.6% Colgate Total toothpaste 10.4%, Water 51.5%) | Manual Wipe | Glass | 98.6 |
| Dynamold Solvents Inc | DS 108 | Petroleum Distillate | Waxes | Wax - Roger Reed 98033 Wax, Hydrocarbon waxes | Manual Wipe | Glass | |
| Ecolab | Oasis Glass Cleaner | Acidic Aqueous | Soaps | Soap - Shampoo, body lotion, bar soaps, hair spray, tooth paste, shaving cream | Manual Wipe | Glass | |

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| EnvirOx LLC | H2Orange2 | Terpene-Semi-Aqueous | Soaps | Soaps - SSL Soil 2 Glass (Colgate Regular shaving cream 5.3%, Arid Extra Extra Spray Deodorant 3.5%, Suave Naturals Flexible Hold hair spray 3.7%, Aleeda Texurizing hair gel 25.6% Colgate Total toothpaste 10.4%, Water 51.5%) | Manual Wipe | Glass | 95.47 |
| Florida Chemical Company | Citrus Burst 7 | Terpene | Waxes | Wax - Roger Reed 98033 Wax, Hydrocarbon waxes | Manual Wipe | Glass | |
| National Diagnostic | Opti Clear | Terpene | Waxes | Wax - Roger Reed 98033 Wax, Hydrocarbon waxes | Manual Wipe | Glass | |
| Ramsey | Free Fall | Semi-Aqueous | Soaps | Soaps - SSL Soil 2 Glass (Colgate Regular shaving cream 5.3%, Arid Extra Extra Spray Deodorant 3.5%, Suave Naturals Flexible Hold hair spray 3.7%, Aleeda Texurizing hair gel 25.6% Colgate Total toothpaste 10.4%, Water 51.5%) | Manual Wipe | Glass | 101.39 |

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|--------------------------|--------------------------------|----------------------|-------|--|-------------|-------|-------|
| The Clean Environment Co | Glass and Hard Surface Cleaner | Alcohol-Semi Aqueous | Soaps | Soaps - SSL Soil 2 Glass (Colgate Regular shaving cream 5.3%, Arid Extra Extra Spray Deodorant 3.5%, Suave Naturals Flexible Hold hair spray 3.7%, Aleeda Texurizing hair gel 25.6% Colgate Total toothpaste 10.4%, Water 51.5%) | Manual Wipe | Glass | 98.04 |
|--------------------------|--------------------------------|----------------------|-------|--|-------------|-------|-------|

Summary:

Conclusion: Cleaning varies from case to case. The SSL recommends process specific testing on potential replacement cleaning chemicals. If more information is needed on a particular product, please contact the lab at (978)934-3133.