# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007

DateRun: 02/05/2007

Experimenters: Heidi Wilcox

ClientType: Metal Working

ProjectNumber: Project #1

Substrates: Brass

PartType: Part

Contaminants: Buffing/Polishing Compounds

Cleaning Methods: Immersion/Soak

Analytical Methods: Visual

Purpose: To evaluate two most effective products found for this client for tarnishing effect with solution at room temperature.

Experimental Procedure: The two most effective products from previous trials and the onsite testing were chosen along with DI water. The products were diluted with DI water to 5% and were left at room temperature ~ 68 F. Two beakers were also filled with DI water. One was left at room temperature, and one was heated to 130F. Three brass cylinders were put in each beaker and the parts were left to soak in them for approximately 2 hrs. The parts were not rinsed or dried after they were taken out. They were put on a white paper towel to be visually observed for tarnish.

Results: The two products at room temperature tarnished the parts. The warm and cold DI water did not. Therefore, the chemistry is the problem with the tarnish issue.

| Cleaner | Observation |
|---|---|
| Polyspray 790 XS | Extreme tarnish, brown color |
| Daraclean 283 | Moderate tarnish, orange to tan color |
| DI Water 130 F | No tarnish, no color change |
| DI Water | No tarnish, no color change |

Summary:

| **Substrates:** | Brass | | | | |
|---|---|---|---|---|---|
| **Contaminants:** | Buffing/Polishing Compounds | | | | |
| **Company Name:** | **Product Name:** | **Conc.:** | **Efficiency:** | **Effective:** | **Observations:** |
| US Polychem Corporation | Polyspray Jet 790 XS | 5 | 0.00 | ☐ | Extreme tarnish, brown color |
| Magnaflux | Daraclean 283 | 5 | 0.00 | ☐ | Moderate tarnish, orange/tan color |
| Water | DI Water | 100 | 0.00 | ☐ | No tarnish, no color change |
| Water | DI Water | 100 | 0.00 | ☐ | No tarnish, no color change |

Conclusion: Both products at 5% and at room temperature tarnished the brass parts. Therefore, the chemistry seems to be the issue with the tarnish issue. Their pH's will be looked up and other cleaners will be selected to clean these parts and also be looked at for tarnishing.