

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006
 DateRun: 10/17/2006
 Experimenters: Jason Marshall
 ClientType: Metal Finishing
 ProjectNumber: Project #1
 Substrates: Sterling/Silver
 PartType: Coupon
 Contaminants: Buffing/Polishing Compounds
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Gravimetric
 Purpose: To evaluate selected cleaners on second supplied buffing compound.

Experimental Procedure: Two alternative products were selected from the previous trial based on effectiveness. A third product was selected based on past testing results from the lab's database. Each product was diluted to 10% in 250 ml beakers using DI water and heated to 130 F on a hot plate.

Nine preweighed silver plated coupons were heavily coated with the Mosher Company Inc Moco Steel Cut #2318 (68434-50-2, 555-43-1, 57-11-4, 26635-92-7, 1344-28-1) buffing compound by heating the buffing compound and rubbing it onto the surface of the coupons. Coupons were weighed a second time to determine the amount of buffing compound added. Three coupons were cleaned in each solution for five minutes using minimal stir bar agitation. Coupons were rinsed for 15 seconds in a tap water bath at 120 F and dried using a dry compressed air for 30 seconds. Once dry coupons were weighed a final time and product efficiencies were calculated.

Results: Two of the products removed over 95% of the buffing compound using immersion cleaning. The following table lists the amount of buffing compound applied, the amount remaining and the efficiency for each coupon cleaned.

| Cleaner | Initial wt | Final wt | % Removed |
|----------------------|------------|----------|-----------|
| Polyspray Jet 790 XS | 0.0492 | -0.0001 | 100.20 |
| | 0.0941 | 0.0006 | 99.36 |
| | 0.3210 | 0.0258 | 91.96 |
| Detergent 8 | 0.0850 | 0.0064 | 92.47 |
| | 0.1276 | 0.0029 | 97.73 |
| | 0.2230 | 0.0056 | 97.49 |
| Texolite 1734 XL | 0.1288 | 0.0389 | 69.80 |
| | 0.1218 | 0.0503 | 58.70 |
| | 0.1004 | 0.0242 | 75.90 |

| Summary: | | Substrates: Sterling/Silver | | | | |
|-------------------------|----------------------|--|-------------|-------------------------------------|---------------|--|
| | | Contaminants: Buffing/Polishing Compounds | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: | |
| US Polychem Corporation | Polyspray Jet 790 XS | 10 | 97.18 | <input checked="" type="checkbox"/> | | |
| Alconox Inc | Detergent 8 | 10 | 95.90 | <input checked="" type="checkbox"/> | | |
| Texo Corporation | Texolite 1734 XL | 10 | 68.13 | <input type="checkbox"/> | | |

Conclusion: The two successful products, Polyspray Jet 790 XS and Detergent 8, will be used to clean supplied parts using immersion cleaning.