CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2000
DateRun:	02/14/2000
Experimenters:	Jason Marshall, Cora Roelofs
ClientType:	Metal Working
ProjectNumber:	Project #1
Substrates:	Brass, Steel
PartType:	Part
Contaminants:	Cutting/Tapping Fluids, Lubricating/Lapping Oils, Dirt, Oil
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Wipe
Purpose:	To further evaluate cleaning capabilities of the three previous cleaning solutions.
Experimental Procedure:	Prior to cleaning the steel tubes were analyzed to determine the level of contamination. Each part was wiped with a finger and observations were recorded. Each cleaner was made into 10% solutions using DI water in 1400 mL beakers and heated to 120 F on a hot plate. One steel part and two stainless steel parts in each solution were cleaned in each beaker for five minutes using stir-bar-agitation. Three hollow tubes were cleaned in a 5-gallon immersion tank with US Polychem and cleaned for five minutes using agitation. All parts were rinsed for 30 seconds in tap water at 120 F, followed by a 30 second rinse in a 10% solution of W.R. Grace Daracoat 615 rinse aid also at 120 F and dried using a Master Appliance Corp, Hot-air gun model HG-301A at 500 oF for five minutes. After drying, wiping observations were made using a swab to determine how clean the parts were. The parts were also touched to determine if the surface still had any contamination. SUBSTRATE MATERIAL: Steel and brass parts, see Figure 1. Figure 1. Three Part Types Cleaned CONTAMINANTS: Oil and Dirt
Results:	The Oakite Product cleaned parts were visually cleaner than the US Polychem parts. The white swab wipe verified the visual observations. It was noted that the small tubes had rust inside them prior to cleaning. The brass part cleaned in the US Polychem appeared to be tarnished. Oakite cleaning of the brass did not have this tarnishing effect on the part.

Summary:

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Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
US Polychem Corporation	Polyspray Jet 790 P	10	0.00	☐	
Oakite Products	Inproclean 3800	10	0.00	☑	

Conclusion: Of the two cleaners evaluated, the Oakite product yielded cleaner parts than those cleaned in the US Polychem solution.