CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2007
DateRun:	01/16/2007
Experimenters:	Jason Marshall
ClientType:	Metal
ProjectNumber:	Project #1
Substrates:	Stainless Steel
PartType:	Coupon
Contaminants:	Dirt, Oxides
Cleaning Methods:	
Analytical Methods:	
Purpose:	To generate a list of alternatives for removing oxides from stainless steel parts.
Experimental Procedure:	Question: I have 1200 pieces of stainless-steel drill bits that have been sitting for a LONG time and have surface dirt, possible sulfur stains, debris, and crud on them. What can I soak them in to remove tarnish? I'm thinking Nitric acid would be ideal but is not very ecological. How about Citric acid? Or NaOH? What concentration of these acids would be safe. Using the laboratory's database for solvent cleaning substitution, the lab generated a list of projects for oxide removal from metal surfaces. The links to the client projects were compiled.
Results:	For removing oxides/tarnish, SSL has worked with several companies. Unfortunately, none of these companies matched exactly the client's situation. However, the products that were identified for these other companies may work. The links for the various projects are listed below. Reading through the reports associated with them will reveal which products did and did not work. http://www.cleanersolutions.org/index.php?action=client_info&client_id=247 http://www.cleanersolutions.org/index.php?action=client_info&client_id=161 http://www.cleanersolutions.org/index.php?action=client_info&client_id=230 http://www.cleanersolutions.org/index.php?action=client_info&client_id=156
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, or you are interested in conducting cleaning trials, please contact the lab at (978)934-3133.