CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2022
DateRun:	04/13/2022
Experimenters:	Zoe Lawson
ClientType:	Metal Working
ProjectNumber:	Project #1
Substrates:	Aluminum, Stainless Steel, Steel
PartType:	Part
Contaminants:	Oil
Cleaning Methods:	Ultrasonics
Analytical Methods:	Gravimetric, Visual
Purpose:	To evaluate Crystal Simple Green at 10% solution for new pre-soiled samples.
Experimental Procedure:	The pre-soiled parts were weighed for dirty weights. The Crystal Simple Green was heated to 140 F and placed in the ultrasonics tank. The parts were then placed in the ultrasonics tank for 10 minutes and 5 minutes, one two parts for each timeframe. The coupons were taken out and left to dry; once the coupons were dry the clean weights were taken. After clean weights, the coupons were wiped down and weighed for initial weights. Visual observations were also noted.
Results:	Crystal Simple Green at a 10% concentration is effective on these substrates for 5- and 10-minute timeframes. At 10 minutes the coupons were clean with minor spotting left on the surface. At 5 minutes the coupons also had minor spotting. Steel was a slight outlier for the 10-minute duration while it did well at 5 minutes. This difference may be due to oil that had not dripped off or removed properly for the 10-minute steel part.

5 Minute Cleaning

Substrate	Duration	Initial wt. of cont.	Final wt. of cont.	%Cont Removed
Aluminum	5 min	0.0216	0.0014	93.52
Steel		0.0362	0.0014	96.13
Stainless Steel		0.0138	0.0008	94.20

10 Minute Cleaning

Substrate	Duration	Initial wt. of cont.	Final wt. of cont.	%Cont Removed
Aluminum	10 min	0.0512	0.0002	99.61
Steel		0.0337	0.0065	80.71
Stainless Steel		0.1422	0.0081	94.30

Summary:

Substrates:	Aluminum, Stainless Steel, Steel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Simple Green	Crystal Simple Green Industrial Cleaner & Degreaser	10	96.13	☑	

Conclusion: Results were effective but not as effective as previous trials. Next trial will increase concentration and focus on lowering the cleaning duration.