CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2021

DateRun: 03/23/2021

Experimenters: Ross Goding, Edward Judge

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Glass/Quartz, Chrome

PartType: Coupon

Contaminants: Calcium/lime

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Visual

Purpose: To evaluate Clorox Clean-up cleaner plus Bleach on removal of SSL soil from chrome, glass, and mirror substrates.

Experimental Procedure: Pre-weighed chrome and glass coupons were coated with glass soap scum using a handheld swab and allowed to dry for 24 hours at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. Three coupons were placed into a Straight-Line Wash ability unit. A Wypall X60 reinforced wipe was attached to the cleaning sled and soaked with 2 sprays of cleaning solutions. Each coupon was sprayed 2 times with the same cleaning solution. Followed by the solution being sprayed, cleaning then began in the SLW unit for 20 cycles (~30 seconds). At the end of the cleaning, coupons could air dry for 24 hours and weighed for a final time. Efficiency was calculated for each coupon.

Results:

Cleaner	Substrate	Initial wt. of contamination	Final wt. of contamination	% Removal	Average % removal	Product removal
1	A	0.0665	0.0067	89.92	80.45	81.91
		0.1462	0.0218	85.09		
		0.1357	0.0457	66.32		
	B	0.0785	0.0065	91.72	94.91	
		0.1005	0.0019	98.11		
		0.1084	-0.1087	200.27*		
	C	0.1009	0.0126	87.51	79.96	
		0.0925	0.0226	75.57		
		0.0759	0.0176	76.811		

Clorox Clean-up cleaner plus Bleach removed on average more than 81% of the glass soap scum. This number is based on using only coupons because one of the glass coupons chipped during the SLW procedure. Efficiency would have been 130% removal for one single coupon.

*Calculated B substrate average with 2 coupons.

Summary:

Conclusion: The Clorox product performed slightly better than the conventional product in gravimetric evaluations. Other than the chipped coupon, the product performed marginally well. Further testing could be completed to address different scenarios in preparation, application and cleaning.