CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 03/30/2016

Experimenters: Sabrina Apel

ClientType: Cleaner Manufacturer

ProjectNumber: Project #8

Substrates: Ceramics, Plastic, Chrome

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate seven supplied all-purpose cleaning products for bathroom soil removal from various surfaces.

Experimental Procedure: Three cleaners, 1204-T Soap Scum, 1205-R Soap Scum, 1206-G Soap Scum, were received “Ready to Use” (RTU). Three others, 207-T Soap Scum, 1208-R Soap Scum, and 1209-G Soap Scum were diluted to the requested concentrations (20oz/gal). A comparative product, Lav Safe was used at full strength. Nine pre-weighed coupons per cleaner (three ceramic, three plastic and three chrome) were coated with one gram of bathroom soap scum, at room temperature, using a handheld swab. The contaminated coupons were air dried for 24 hours at room temperature and weighed again to determine the amount of soil added the following day.

Three coupons of each substrate were placed in the SLW unit, and a KC Wypal reinforced paper towel was attached to the cleaning sled and treated with two sprays of cleaning solution. Each coupon was sprayed twice with the same cleaning solution. The cleaning unit was run for 20 cycles (equivalent of 30 seconds of cleaning). At the end of the cleaning cycle, the coupons were wiped once with a dry paper towel. Coupons dried overnight and final weights were recorded. Efficiencies were calculated and recorded.

Results: The ceramic coupons were rerun due to the weight gain from the cleaners soaking into the coupons. Although, they appeared to show a reduction of soil, the gravimetric analysis was showing an increase in weight from the contaminated. After the retesting of the ceramic coupons, coupons were dried an extra 24 hours to ensure an accurate gravimetric result (results now shown in the results below). Three of the supplied formulations, 1204-T, 1205-R and 1209-G, worked better than the comparative product. A fourth product, 1206-G Soap Scum was about equal to the comparative product when factoring in the deviation in testing. The other two products, 1207-T, 1208-R were less than the target but with standard deviation, they could be considered comparable.

Summary:

Substrates:	Ceramics, Plastic, Chrome				
Contaminants:	Films, Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
EnvirOx LLC	Hard Water/Soap Scum Remover Lot 1204-T	100	78.39	☑	
EnvirOx LLC	Hard Water/Soap Scum Remover Lot 1205-R	100	84.96	☑	
EnvirOx LLC	Hard Water/Soap Scum Remover Lot 1206-G	100	71.40	☐	
EnvirOx LLC	Hard Water/Soap Scum Remover Lot 1207-T	100	59.48	☐	
EnvirOx LLC	Hard Water/Soap Scum Remover Lot 1208-R	100	65.22	☐	
EnvirOx LLC	Hard Water/Soap Scum Remover Lot 1209-G	100	78.68	☑	
Next-Gen Supply Group	LAV Safe 8	100	74.91	☐	

Conclusion: