

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2018
 DateRun: 10/14/2018
 Experimenters: Sabrina Apel, Ted Kearney
 ClientType: Cleaner Manufacturer
 ProjectNumber: Project #1
 Substrates: Ceramics, Plastic, Chrome
 PartType: Coupon
 Contaminants: Films, Soaps
 Cleaning Methods: Manual Wipe
 Analytical Methods: Gravimetric

Purpose: To evaluate bathroom cleaning products at removing soils from ceramic, plastic, and chrome substrates.

Experimental Procedure: Nine pre-weighed coupons per cleaner (three Ceramic, three Plastic and three Chrome) were coated with a half of a gram of SSL Soil 1 Bathroom Soil 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. Three coupons of each substrate were placed in the Straight-Line Washability (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 SLW unit ran for 20 cycles (equivalent of 30 seconds of cleaning). Coupons were air dried after cleaning before recording final weights.

Results:

Cleaner	Substrate	Initial wt of cont.	Final wt of cont.	% Cont Removed	% Average	% Overall Cleaner
Fas-Pak MF Deep Foam Spray	Ceramic	0.1304	0.0098	92.48	91.04	78.99
		0.1307	0.0117	91.05		
		0.1218	0.0127	89.57		
	Plastic	0.1298	0.0312	75.96	58.98	
		0.1287	0.0395	69.31		
		0.1522	0.1040	31.67		
	Chrome	0.1275	0.0239	81.25	86.95	
		0.1216	0.0065	94.65		
		0.1176	0.0177	84.95		
Lysol Toilet Bowl Cleaner	Ceramic	0.1135	0.0084	92.60	90.87	78.46
		0.1152	0.0138	88.02		
		0.1125	0.0090	92.00		
	Plastic	0.1426	0.0354	75.18	83.49	
		0.1456	0.0205	85.92		
		0.1403	0.0149	89.38		
	Chrome	0.1249	0.0955	23.54	61.02	
		0.1158	0.0309	73.32		
		0.1225	0.0169	86.20		
Lysol Toilet Bowl Cleaner w/ Hydrogen Peroxide	Ceramic	0.1235	0.0063	94.90	94.46	91.59
		0.1319	0.0068	94.84		
		0.1275	0.0081	93.65		
	Plastic	0.1421	0.0183	87.12	87.81	
		0.1415	0.0229	83.82		
		0.1477	0.0111	92.48		
	Chrome	0.1483	0.0124	91.64	92.49	
		0.1619	0.0047	97.10		
		0.1625	0.0183	88.74		
Clorox Toilet Cleaning Gel	Ceramic	0.1191	0.0152	87.24	91.46	87.84
		0.1288	0.0089	93.09		
		0.1295	0.0077	94.05		
	Plastic	0.1467	0.0211	85.62	82.94	
		0.1410	0.0343	75.67		

CLEANING LABORATORY EVALUATION SUMMARY

		0.1364	0.0170	87.54		
	Chrome	0.1304	0.0112	91.41	89.11	
		0.1309	0.0179	86.33		
		0.1451	0.0151	89.59		
Scrubbing Bubbles Toilet Bowl Cleaner Bubbly Beach Gel	Ceramic	0.1235	0.0105	91.50	89.40	89.24
		0.1450	0.0181	87.52		
		0.1673	0.0181	89.18		
	Plastic	0.1327	0.0166	87.49	90.66	
		0.1511	0.0093	93.85		
		0.1421	0.0133	90.64		
	Chrome	0.1399	0.0094	93.28	87.66	
		0.1275	0.0253	80.16		
		0.1367	0.0143	89.54		

Summary:

Substrates:	Ceramics, Plastic, Chrome				
Contaminants:	Films, Soaps				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Fas-Pak Inc	MF Deep Foam Spray	100	78.99	<input checked="" type="checkbox"/>	
Reckitt Benckiser	Lysol Power Toilet Bowl Cleaner	100	78.46	<input checked="" type="checkbox"/>	
Reckitt Benckiser	Lysol Toilet Bowl Cleaner with Hydrogen Peroxide	100	91.59	<input checked="" type="checkbox"/>	
Clorox Company	Clorox Toilet Cleaning Gel	100	87.84	<input checked="" type="checkbox"/>	
SC Johnson & Son Inc	Scrubbing Bubbles	100	89.24	<input checked="" type="checkbox"/>	

Conclusion:

Fas-Pak MF Deep Foam Spray had a 79% efficiency of removing SSL Soil 1 from ceramic, plastic, and chrome substrates. Fas-Pak MF Deep Foam Spray was either less or as effective in performance of soil removal in comparison to the conventional cleaning products. The most effective cleaner was Lysol Toilet Bowl Cleaner with Hydrogen Peroxide with a 92% efficiency in soil removal.