CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2009
DateRun:	11/02/2009
Experimenters:	Jason Marshall, Junhee Cho
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Textile
PartType:	Coupon
Contaminants:	Inks, Dirt, Oil, Food
Cleaning Methods:	Manual Wipe
Analytical Methods:	Visual
Purpose:	To reevaluate supplied product at a higher concentration for carpet stain removal following CM110
Experimental Procedure:	The purpose of this evaluation was to assess effectiveness of spot and stain removal chemicals by rating the removal of specific staining agents. Two almond white tufted cut pile test carpet measuring 18 inch by 24 inch were stained with eight staining agents. Each staining agent was applied to the test carpet in triplicate, spaced out at 2.5 inches. The staining agent was applied to the surface using a trigger pump spray bottle capable of delivering 2.5 +/- 0.5 ml of stain mixture. The spray was focused within a staining ring measuring 1.5 inches wide by 1.2 inches high. The eight staining agents included mustard, catsup, coffee, grape juice, black permanent marker (2 1” lines instead of 2.5 ml), dirty motor oil, AATCC synthetic soil and chocolate syrup. These staining agents were used according to the dilution ratios listed in the table below. Staining Agent Dilution ratio Mustard 1:2 mustard:water Catsup 1:3 catsup:water Hot Coffee 60 deg +/-3C 1 teaspoon coffee to 175 ml water Purple Grape Juice Full concentration Black Permanent Marker-Chisel Point N/A Dirty Motor Oil 1:1 oil:heptane* AATCC Synthetic Soil 0.5 grams/100 ml water Chocolate Syrup 1:4 chocolate:water *heptane used in place of tetradecane The staining agent mixture was poured into the spray bottle. The nozzle of the bottle was centered inside the staining ring and three pumps of the spray bottle were performed to deliver the 2.5 ml of mixture to the test carpet. The staining ring was left in place until the staining agent was completely soaked into the test carpet. The ring was rinsed in between each staining location. The two completed test carpets were allowed to dry for 24 hours +/- 2 hours before conducting the stain removal procedure. Following the overnight drying, any excess solid staining agent was removed from the test carpet. The cleaning agent was applied to the surface so that the stain was saturated. The solution was allowed to sit on the stain for 2 minutes. The saturated stain was blotted with a clean dry Kimberly Clark Reinforced wiper towel. Any transfer of the stain/cleaning agent to the towel was noted. Blotting continued until all evidence of liquid transfer was gone. At this point, the cleaning solution was applied to the surface and blotted until the stain was completely removed or three applications of the cleaning solution were performed. The total number of applications was recorded for each stain. The test carpet was allowed to sit for another 24 +/-2 hours to dry before evaluating the stains. A minimum of three lab personnel were used to evaluate the stain removal efficacy which were then averaged together for the final rating. The evaluations were based on the following scale: Rating Key 5 No Stain 4 Slight Stain 3 Noticeable Stain 2 Considerable Stain 1 Severe Stain
Results:	Based on the observations of three lab staff members, the overall average for stain removal for the supplied product was the better than water. The higher concentration for the product resulted in average cleaning rating of 25, just higher than the Passing Composite score of 24. Results from the three analysts are listed in the table below. Manufacturer: CleanLine Product ID: Super H2O2 Product Category: Spotter Carpet Substrate: Residential Nylon cut pile (untreated)

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Super H2O2	Analyst 1	Analyst 2	Analyst 3	# Applications
Staining Agent	Ave-1	Ave-2	Ave-3	
Mustard	3	2	3	3
Catsup	4	4	4	2
Coffee	3	4	2	4
Grape Juice	2	3	1	4
Black Marker	2	2	2	3
Motor Oil	4	4	4	2
Soil	4	4	3	5
Chocolate Syrup	4	4	3	3
Composite Score	26	27	22	
			25.0	
Water	Analyst 1	Analyst 2	Analyst 3	
Staining Agent	Ave-1	Ave-2	Ave-3	
Mustard	1	1	1	6
Catsup	2	2	2	6
Coffee	2	3	2	4
Grape Juice	3	3	3	4
Black Marker	3	1	3	4
Motor Oil	4	3	4	7
Soil	1	1	1	4
Chocolate Syrup	2	3	2	6
Composite Score	18	17	18	
			17.7	

Summary:

Substrates:	Textile				
Contaminants:	Inks, Dirt, Oil, Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Cleanline Products	H2O2 Super Citrus Concentrate	2	0.00	☑	

Conclusion: The supplied product tested at a 2% concentration was effective for carpet stain removal based on the ranking criteria established in the CM 110 standard.