CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2015
DateRun:	08/31/2015
Experimenters:	George Liang, Russell Curtis
ClientType:	Cleaning Equipment Mfr
ProjectNumber:	Project #2
Substrates:	Glass/Quartz
PartType:	Part
Contaminants:	Dirt
Cleaning Methods:	Manual Wipe
Analytical Methods:	Visual, Timing
Purpose:	To evaluate the efficiency of a product for cleaning window surfaces
Experimental Procedure:	One 30”X40” section of window was marked off as a testing surface. To the surface, 5 grams of AATC was mixed in 400 ml water to create a soil solution. The mixture was applied by taking a paint roller and soaking it in the soil solution and then swiping the paint roller on the window surface 25 times. The soiled surface was allowed to dry for 20 minutes. Once the soil was dry, testing took place for all the cleaning tools in way that they would be used in real world conditions. For the first round of testing the participants were told to clean the window fully till no trace of soil could be found, they were not instructed on how to use the tools and were timed during their performance. When they were done with one window that window was cleaned and soiled for the next test in that round. For the second round of testing we performed similar analysis, but the test was run with the participants following manufacturer instructions for the paper towels and the microfiber pad. The microfiber towel was not run again. All evaluations are based on a time performance. Tools Evaluated: Microfiber towel, Paper Towel- Bounty Dura Towel, Unger Microfiber Pad
Results:	Time Analysis Round 1 No Instructions: All Times are provided in seconds

	Microfiber towel			Paper Towel			Microfiber Pad		
Lab Tech 1	32	33	23	29	32	30	19	25	18
Lab Tech 2	61	34	40	55	60	38	36	35	34
Lab Tech 3	34	34	23	66	47	27	22	29	27

Result of Time Analysis Round 2 with instructions: All Times are provided in seconds

	Paper Towels			Microfiber Pad		
Lab Tech 1	19	23	19	23	22	21
Lab Tech 2	37	34	27	21	25	24
Lab Tech 3	27	28	24	19	25	22

Summary

Round 1	Averages		
	Microfiber	Paper	Microfiber Pad
Lab Tech 1	29	30	21
Lab Tech 2	45	51	35
Lab Tech 3	30	47	26
Overall Average	35	43	27

Round 2

Round 2	Averages	
	Paper Towels	Microfiber Pad
Lab Tech 1	20	22
Lab Tech 2	33	23
Lab Tech 3	26	22
Overall Average	26	22

Summary:

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Substrates:	Glass/Quartz				
Contaminants:	Dirt				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Water	Water	100	0.00	☐	Microfiber (spray on towel) F 2.54 S 2.50 T 44.3
Water	Water	100	0.00	☐	Microfiber (spray on the window) F 1.58 S 1.70 T 16.7
Water	Water	100	0.00	☐	Paper Towel F 2.88 S 3.92 T 18.3
Water	Water	100	0.00	☑	Unger Microfiber Pad Tool F 2.63 S 2.53 T 18.0

Conclusion: In both rounds of testing the Microfiber Pad (Unger Tool) performed better in cleaning the window than the other two cleaners, the microfiber pad also performed better with manufacturer instructions.