CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2016
DateRun:	08/08/2016
Experimenters:	James Keats
ClientType:	Cleaning Equipment Mfr
ProjectNumber:	Project #1
Substrates:	Vinyl Composite Tiles
PartType:	Coupon
Contaminants:	Food
Cleaning Methods:	Mechanical Agitation
Analytical Methods:	Visual
Purpose:	

Experimental Procedure:

Apply soil to 4’ X 4’ clean vinyl floor, spreading 1g of soil onto even numbered tiles with a swab and odd tiles by dripping 1g of soil onto them (16g per floor). No drying is required for the Vinaigrette. Attach a cleaning pad to the Braava unit and completely fill with water. Then place the Braava unit onto the floor. Turn on the Braava unit, and begin the cleaning cycle. At intervals of 10 seconds, take a picture of the floor. Once the cycle is complete, empty any water still in the Braava unit and dispose of the pad.

Pictures are taken periodically to compare effectiveness of cleaning pad over time. This will allow beginning, middle, and end cleaning to be visually evaluated.

To evaluate total soil removal, a visual observation will be made. This observation will be an estimation of the % soil removed from each tile by observing the amount of soil removed by a paper towel. Each tile will be wiped with a paper towel in a circular motion until the entire tile has been wiped. Also a control paper towel will be prepared by wiping off 1g of soil. In addition to this rating, observers will also be asked to rate the overall cleanliness of the floor from 1-5 (1 being no soil remaining).

Tile numbers

4	5	6	7
3	14	15	8
2	13	16	9
1	12	11	10

^^^

Braava unit starts here.

Results:

The floor was soiled and cleaned once.

- Found that the Braava unit stopped its cleaning cycle after ~52 minutes

Percent removal Trial 1

(Ex: 95% means that 5% of the tile was covered in contaminant.)

Observer 1 – rating: 2

80%	75%	90%	90%
80%	100%	97%	90%
80%	97%	95%	80%
85%	80%	95%	90%

Observer 2 – rating: 2

10%	80%	70%	75%
40%	100%	95%	85%
30%	90%	95%	65%
35%	40%	90%	90%

Observer 3 – rating: 1.5

60%	95%	90%	95%
80%	100%	95%	93%
80%	95%	95%	93%
75%	85%	95%	90%

Summary:

Substrates:	Vinyl Composite Tiles

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Contaminants:	Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
iRobot	iRobot Braava unit	100	0.00	☑	

Conclusion:

Pad seemed clean consistently across entire floor.

Braava unit passed over the same sections of floor numerous times, moving over the right side tiles 22 times.

Manual wipe tests will be conducted with paper towels and water on a floor soiled with Vinaigrette in order to provide a comparison to the Braava unit. The time it takes to clean the floor will be recorded. Once cleaned, the floor will be evaluated with the same visual method mentioned earlier in this report.