# CLEANING LABORATORY EVALUATION SUMMARY

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|---|---|
| SCL #: | 2016 |
| DateRun: | 08/08/2016 |
| Experimenters: | James Keats |
| ClientType: | Cleaning Equipment Mfr |
| ProjectNumber: | Project #1 |
| Substrates: | Ceramics |
| PartType: | Coupon |
| Contaminants: | Food |
| Cleaning Methods: | Mechanical Agitation |
| Analytical Methods: | Visual |
| Purpose: | Evaluate beginning, middle, and end effectiveness of iRobot cleaning pad. |

Experimental Procedure:

Apply soil to 39” X 39” clean ceramic floor, spreading 1g of soil onto even numbered tiles with a swab and odd tiles by dripping 1g of soil onto them (9g 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. The floor will first be allowed to dry for 30 minutes to make it easier to identify the clear soil. This observation will be an estimation of the % soil removed from each tile by comparing before and after pictures of the floor. In addition to this, 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 ~33 minutes

**Percent removal Trial 1**

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

Observer 1 – rating: 1.5

| | | |
|---|---|---|
| 93% | 90% | 85% |
| 80% | 75% | 70% |
| 85% | 75% | 80% |

Observer 2 – rating: 3.5

| | | |
|---|---|---|
| 95% | 85% | 90% |
| 85% | 60% | 20% |
| 75% | 60% | 40% |

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Observer 3 – rating: 2

| | | |
|---|---|---|
| 95% | 90% | 90% |
| 90% | 95% | 85% |
| 90% | 90% | 70% |

Summary:

| | |
|---|---|
| **Substrates:** | Ceramics |
| | Food |

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

Conclusion:

Pad seemed to clean consistently across entire floor.

The Braava unit was stuck in top right corner for more than a minute. It was continually trying to push against the blue cabinet and would not continue on to the rest of the floor until pushed slightly. This happened several times throughout the 33 minutes.