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|  |  |  | |  | |  |  | | |  |  | | |  | |  |  | | | |
| U15, |  | Phone: 02 8507 0725 | | | | Sample Received: | | | 12/02/2019 | | | | | | | | | | |
| 168-180 Victoria Rd |  | Fax: 02 8069 5851 | | | | Sample Tested: | | | 12/02/2019 | | | | | | | | | | |
| Marrickville |  | Email: team@enzymelabs.com.au | | |  | Testing Officer: | | | Brian Blake | | | | | | | | | |
| NSW, 2204 |  | Web: www.enzymelabs.com.au | | |  | Tested At: | | | Marrickville | | | | | | | | | |
|  |  |  | |  | | Job No. | | | 20314-1a | | | | | | | | | | |
| **TEST REPORT** | | | | | | | | | | | | | | |
| Customer: | Coles, L2 M8 800 Toorak Road Hawthorn East Victoria 3123 Australia | | | | | | | | | | |  |  |  | |  |  |
|  |  | |  |  | |  | |  | | | |  |  |  | |  |  |

**Test Details**

**Test Conducted: EL-TM-006-01 – Automatic Dishwasher Evaluation**

The test method outlined above involves reading the colour value of pre-stained melamine tiles before and after the wash cycle in a standard household dishwasher. The difference in colour of the stain before and after washing allows for the calculation of the percentage of soil removed.

A minimum of 4 replicates are performed to determine the variance in testing.

**Test Conditions:** Type of machine: Fisher & Paykel DW60CE; Water hardness: 60 (+/- 5) ppm; Wash Cycle: Normal

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| --- |
| **NOTE: Only samples that have been tested using the same test batch can be compared.**  SWATCH BATCH USED FOR THIS REPORT: 110219 |

**Samples Tested**

Table 2 details all samples that are included in this report.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | **Sample Name** | **Sample Batch** | **ELRef** | | BM51 | None | 51260 | | BM52 | None | 51261 | | TS58 | None | 51262 | | TS59 | None | 51263 | |

Table 2. Samples tested

**Summary Results**

Table 3 provides the average result of all replicates performed for each product.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Sample** | **BM51** | **BM52** | **TS58** | **TS59** | | Egg Yolk (DM-21) | 82.5% | 83.0% | 78.2% | 60.3% | | Rice Starch (DM-78) | 68.9% | 71.2% | 67.9% | 42.4% | | Baked Light Cheese (DM-06) | 87.4% | 83.8% | 67.6% | 48.4% | | Red Wine (DM-51) | 51.8% | 49.0% | 52.9% | 47.1% | | Coffee (DM-81) | 52.0% | 51.7% | 51.6% | 46.6% | | Minced Meat (DM-91) | 73.2% | 76.5% | 74.0% | 61.6% | |

Table 3. Average results for each stain for each product.

**Test Product Individual Test Scores**

The individual results of the different sets of stains washed for each product are listed here. The experimental standard deviation of the mean using a coverage factor of 2 to give a 95% confidence interval is given as the measurement uncertainty expressed as an absolute value.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **BM51 None** | | | | | | | | | **Test** | **Result 1** | **Result 2** | **Result 3** | **Result 4** |  | **Average** | **Std. Dev.** | | Egg Yolk (DM-21) | 82.45% | 82.41% | 82.73% | 82.57% |  | 82.5% | 0.1% | | Rice Starch (DM-78) | 66.59% | 64.93% | 73.26% | 70.73% |  | 68.9% | 3.8% | | Baked Light Cheese (DM-06) | 88.24% | 88.82% | 86.91% | 85.49% |  | 87.4% | 1.5% | | Red Wine (DM-51) | 49.98% | 52.43% | 53.71% | 51.00% |  | 51.8% | 1.6% | | Coffee (DM-81) | 48.35% | 53.69% | 51.68% | 54.45% |  | 52.0% | 2.7% | | Minced Meat (DM-91) | 73.92% | 74.11% | 72.37% | 72.44% |  | 73.2% | 0.9% |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **BM52 None** | | | | | | | | | **Test** | **Result 1** | **Result 2** | **Result 3** | **Result 4** |  | **Average** | **Std. Dev.** | | Egg Yolk (DM-21) | 84.97% | 84.93% | 80.94% | 81.29% |  | 83.0% | 2.2% | | Rice Starch (DM-78) | 69.29% | 72.47% | 70.50% | 72.38% |  | 71.2% | 1.5% | | Baked Light Cheese (DM-06) | 86.74% | 89.16% | 78.20% | 81.11% |  | 83.8% | 5.0% | | Red Wine (DM-51) | 48.99% | 48.69% | 47.44% | 50.81% |  | 49.0% | 1.4% | | Coffee (DM-81) | 49.89% | 51.84% | 52.26% | 52.96% |  | 51.7% | 1.3% | | Minced Meat (DM-91) | 73.90% | 73.58% | 79.09% | 79.34% |  | 76.5% | 3.2% |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **TS58 None** | | | | | | | | | **Test** | **Result 1** | **Result 2** | **Result 3** | **Result 4** |  | **Average** | **Std. Dev.** | | Egg Yolk (DM-21) | 78.74% | 80.68% | 72.37% | 80.86% |  | 78.2% | 4.0% | | Rice Starch (DM-78) | 67.41% | 66.63% | 69.49% | 67.93% |  | 67.9% | 1.2% | | Baked Light Cheese (DM-06) | 67.15% | 64.98% | 65.41% | 72.82% |  | 67.6% | 3.6% | | Red Wine (DM-51) | 52.22% | 54.02% | 52.00% | 53.48% |  | 52.9% | 1.0% | | Coffee (DM-81) | 52.14% | 52.77% | 50.85% | 50.58% |  | 51.6% | 1.0% | | Minced Meat (DM-91) | 73.33% | 71.98% | 76.78% | 74.01% |  | 74.0% | 2.0% |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **TS59 None** | | | | | | | | | **Test** | **Result 1** | **Result 2** | **Result 3** | **Result 4** |  | **Average** | **Std. Dev.** | | Egg Yolk (DM-21) | 56.79% | 68.40% | 55.82% | 60.08% |  | 60.3% | 5.7% | | Rice Starch (DM-78) | 32.52% | 49.58% | 51.66% | 35.89% |  | 42.4% | 9.6% | | Baked Light Cheese (DM-06) | 43.58% | 53.68% | 49.34% | 47.15% |  | 48.4% | 4.2% | | Red Wine (DM-51) | 47.63% | 47.86% | 47.42% | 45.61% |  | 47.1% | 1.0% | | Coffee (DM-81) | 47.19% | 47.01% | 46.28% | 45.93% |  | 46.6% | 0.6% | | Minced Meat (DM-91) | 60.93% | 62.38% | 64.05% | 59.11% |  | 61.6% | 2.1% | |

**Individual Soil Statistical Comparison Tables**

A comparison grid is created that compares every product in the set with every other product in the set using a statistical t-test. The statistical t-test calculates whether one products result set is statistically different to another products result set with a 95% confidence interval.

**Egg Yolk**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  | | --- | --- | --- | | **Egg Yolk (DM-21): BM51 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM52 |  | |  | TS58 |  |  |  |  |  | | --- | --- | --- | | **Egg Yolk (DM-21): BM52 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM51 |  | |  | TS58 |  |  |  |  |  | | --- | --- | --- | | **Egg Yolk (DM-21): TS58 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM51 |  | |  | BM52 |  |  |  |  |  | | --- | --- | --- | | **Egg Yolk (DM-21): TS59 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | |  |  | BM51 | |  |  | BM52 | |  |  | TS58 | |

**Rice Starch**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | **Rice Starch (DM-78): BM51 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM52 |  | |  | TS58 |  |  |  |  |  | | --- | --- | --- | | **Rice Starch (DM-78): BM52 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM51 |  | |  | TS58 |  |  |  |  |  | | --- | --- | --- | | **Rice Starch (DM-78): TS58 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM51 |  | |  | BM52 |  |  |  |  |  | | --- | --- | --- | | **Rice Starch (DM-78): TS59 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | |  |  | BM51 | |  |  | BM52 | |  |  | TS58 | |

**Baked Light Cheese**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  | | --- | --- | --- | | **Baked Light Cheese (DM-06): BM51 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS58 | BM52 |  | | TS59 |  |  |  |  |  |  | | --- | --- | --- | | **Baked Light Cheese (DM-06): BM52 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS58 | BM51 |  | | TS59 |  |  |  |  |  |  | | --- | --- | --- | | **Baked Light Cheese (DM-06): TS58 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 |  | BM51 | |  |  | BM52 |  |  |  |  | | --- | --- | --- | | **Baked Light Cheese (DM-06): TS59 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | |  |  | BM51 | |  |  | BM52 | |  |  | TS58 | |

**Red Wine**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  | | --- | --- | --- | | **Red Wine (DM-51): BM51 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM52 |  | |  | TS58 |  |  |  |  |  | | --- | --- | --- | | **Red Wine (DM-51): BM52 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | |  | BM51 | TS58 | |  | TS59 |  |  |  |  |  | | --- | --- | --- | | **Red Wine (DM-51): TS58 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | BM52 | BM51 |  | | TS59 |  |  |  |  |  |  | | --- | --- | --- | | **Red Wine (DM-51): TS59 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | |  | BM52 | BM51 | |  |  | TS58 | |

**Coffee**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  | | --- | --- | --- | | **Coffee (DM-81): BM51 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM52 |  | |  | TS58 |  |  |  |  |  | | --- | --- | --- | | **Coffee (DM-81): BM52 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM51 |  | |  | TS58 |  |  |  |  |  | | --- | --- | --- | | **Coffee (DM-81): TS58 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM51 |  | |  | BM52 |  |  |  |  |  | | --- | --- | --- | | **Coffee (DM-81): TS59 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | |  |  | BM51 | |  |  | BM52 | |  |  | TS58 | |

**Minced Meat**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  | | --- | --- | --- | | **Minced Meat (DM-91): BM51 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM52 |  | |  | TS58 |  |  |  |  |  | | --- | --- | --- | | **Minced Meat (DM-91): BM52 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM51 |  | |  | TS58 |  |  |  |  |  | | --- | --- | --- | | **Minced Meat (DM-91): TS58 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | | TS59 | BM51 |  | |  | BM52 |  |  |  |  |  | | --- | --- | --- | | **Minced Meat (DM-91): TS59 None** | | | | **Statistically Better Than:** | **No Statistical Difference** | **Statistically Worse Than:** | |  |  | BM51 | |  |  | BM52 | |  |  | TS58 | |

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| Authorised by: |  |  |  | 22/02/2019 |  |  |  |  |  |  |
|  | Senior Chemist(B. Science) | |  |  |  |  |  |  |  |  |
| The data pertains solely to the samples tested. The homogeneity or the sampling of the samples cannot be guaranteed and therefore may not be representative of the lot or batch or other samples. Consequently the data may not necessarily justify the acceptance or rejection of a lot or batch, a product recall or support legal proceedings. It is the responsibility of the client to provide all information relevant to the analysis requested. This report does not imply that Enzyme Labs has been engaged to consult upon the consequences of the analysis and for any action that should be taken as a result of the analysis. This report must be reproduced in full unless written permission is obtained from Enzyme Labs. | | | | | | | | | | |
| **END OF REPORT** | | | | | | | | | | |