

## MILK SAMPLE RESULTS for 12 DECEMBER 2017

Samples analysed by: Mériex NutriSciences. E-mail: [za-info@mxns.com](mailto:za-info@mxns.com)

Sample temperature at lab: 5.0 deg C. Avg., max., min. & CV% are only those of cow's milk suppliers' results

| Sample Number | Ring Test (CA) | E coli (per ml) | Coli-forms (per ml) | Freezing point °C | % Added water | Bacto Count (x1K/ml) Calculated | Butterfat %  | Protein %   | Lactose %   | SCC (x1,000/ml) | Milk Urea Nitrogen (mgN/dl) | Name | TPC (Bactocount was calculated from this TPC) (See attached note) |
|---------------|----------------|-----------------|---------------------|-------------------|---------------|---------------------------------|--------------|-------------|-------------|-----------------|-----------------------------|------|---|
| <b>Avg*</b>   |                |                 |                     |                   |               | <b>10.32</b>                    | <b>3.75</b>  | <b>3.17</b> | <b>4.85</b> | <b>236</b>      | <b>17.9</b>                 |      | <b>* Trimmed mean, 20% discarded</b>                              |
| <b>Max</b>    |                |                 |                     |                   |               | <b>178</b>                      | <b>7.50</b>  | <b>3.63</b> | <b>5.00</b> | <b>682</b>      | <b>25.4</b>                 |      |   |
| <b>Min</b>    |                |                 |                     |                   |               | <b>0</b>                        | <b>2.95</b>  | <b>2.95</b> | <b>4.59</b> | <b>87</b>       | <b>10.3</b>                 |      |   |
| <b>CV%</b>    |                |                 |                     |                   |               | <b>216.3%</b>                   | <b>19.5%</b> | <b>5.3%</b> | <b>1.8%</b> | <b>45.1%</b>    | <b>20.4%</b>                |      |   |

| Spec. Raw Milk | Neg | Nil | < 10 | -0.512 to -0.540 | Nil | Unofficial: <200,000 | > 3.3 | > 3.0 | 4.5 – 5.1 | < 500,000 | 12 – 18 | Total plate count: <200,000/ml |
|----------------|-----|-----|------|------------------|-----|----------------------|-------|-------|-----------|-----------|---------|--------------------------------|
| 25322          | -   | -   | -    | -                | -   | 173                  | 3.28  | 3.02  | 4.93      | 242       | 17.6    | 176                            |
| 25508          | -   | -   | -    | -                | -   | 7                    | 2.95  | 2.95  | 4.95      | 149       | 14.7    | 17                             |
| 26037          | -   | -   | -    | -                | -   | 7                    | 3.42  | 3.02  | 4.82      | 251       | 17.6    | 17                             |
| 26038          | -   | -   | -    | -                | -   | 7                    | 3.76  | 3.06  | 4.89      | 87        | 22.4    | 17                             |
| 26230          | -   | -   | -    | -                | -   | 1                    | 3.58  | 3.12  | 4.89      | 207       | 19.4    | 3                              |
| 26288          | -   | -   | -    | -                | -   | 0                    | 3.34  | 3.10  | 4.86      | 129       | 18.9    | 1                              |
| 26289          | -   | -   | -    | -                | -   | 0                    | 3.53  | 3.02  | 4.83      | 190       | 15.5    | 1                              |
| 26300          | -   | -   | -    | -                | -   | 2                    | 4.58  | 3.26  | 4.70      | 293       | 23.0    | 8                              |
| 26327          | -   | -   | -    | -                | -   | 43                   | 3.58  | 3.17  | 4.77      | 164       | 25.4    | 64                             |
| 26338          | -   | <10 | <10  | -0.525           | 0   | 4                    | 3.23  | 3.00  | 4.91      | 242       | 22.1    | 11                             |
| 26339          | Neg | <10 | <10  | -0.524           | 0   | 5                    | 3.78  | 3.16  | 4.85      | 440       | 20.2    | 14                             |
| 26385          | -   | -   | -    | -                | -   | 0                    | 3.94  | 3.23  | 4.84      | 211       | 20.0    | 2                              |
| 26386          | -   | -   | -    | -                | -   | 2                    | 3.82  | 3.13  | 4.88      | 200       | 18.8    | 8                              |
| 26399          | -   | -   | -    | -                | -   | 0                    | 3.90  | 3.20  | 4.85      | 226       | 21.9    | 1                              |
| 26443          | -   | -   | -    | -                | -   | 99                   | 3.33  | 3.27  | 4.99      | 230       | 18.8    | 118                            |
| 26458          | -   | -   | -    | -                | -   | 7                    | 3.59  | 3.17  | 4.95      | 300       | 16.9    | 17                             |
| 26459          | -   | -   | -    | -                | -   | 6                    | 3.21  | 3.11  | 4.97      | 247       | 16.4    | 16                             |
| 26485          | -   | -   | -    | -                | -   | 1                    | 3.30  | 3.03  | 4.88      | 200       | 16.7    | 3                              |
| 26495          | -   | -   | -    | -                | -   | 5                    | 3.33  | 2.99  | 4.78      | 566       | 12.7    | 13                             |
| 26507          | -   | -   | -    | -                | -   | 0                    | 3.64  | 3.09  | 4.93      | 263       | 18.0    | 1                              |
| 26539          | Pos | -   | -    | -                | -   | 16                   | 3.91  | 3.07  | 4.84      | 264       | 16.4    | 31                             |
| 26542          | Neg | <10 | <10  | -0.527           | 0   | 6                    | 2.55  | 4.01  | 3.50      | 1400      | 21.6    | 15                             |
| 26545          | Pos | -   | -    | -                | -   | 2                    | 3.44  | 2.99  | 4.82      | 388       | 14.6    | 7                              |
| 26546          | Pos | -   | -    | -                | -   | 9                    | 3.31  | 2.97  | 4.85      | 322       | 15.4    | 21                             |
| 26562          | -   | -   | -    | -                | -   | 1                    | 5.37  | 3.63  | 4.67      | 153       | 16.6    | 3                              |
| 26565          | -   | -   | -    | -                | -   | 0                    | 3.78  | 3.11  | 4.92      | 186       | 19.0    | 1                              |
| 26583          | -   | -   | -    | -                | -   | 2                    | 3.84  | 3.08  | 5.00      | 166       | 15.3    | 8                              |
| 26595          | Pos | -   | -    | -                | -   | -                    | 3.96  | 3.42  | 4.87      | 342       | 11.4    | 0                              |
| 26596          | -   | -   | -    | -                | -   | 3                    | 4.11  | 3.43  | 4.81      | 326       | 19.7    | 9                              |
| 26597          | -   | -   | -    | -                | -   | 3                    | 4.16  | 3.41  | 4.80      | 354       | 23.4    | 9                              |
| 26615          | -   | -   | -    | -0.524           | 0   | -                    | 4.27  | 3.39  | 4.76      | 221       | 18.0    | 0                              |
| 26616          | -   | -   | -    | -                | -   | 41                   | 4.46  | 3.25  | 4.72      | 281       | 19.2    | 62                             |
| 26617          | -   | -   | -    | -                | -   | 6                    | 7.50  | 3.17  | 4.59      | 682       | 12.8    | 15                             |
| 26618          | -   | -   | -    | -                | -   | 14                   | 4.20  | 3.44  | 4.75      | 228       | 21.9    | 28                             |
| 26619          | -   | -   | -    | -                | -   | 4                    | 4.29  | 3.45  | 4.76      | 214       | 24.9    | 11                             |
| 26630          | -   | -   | -    | -                | -   | 362                  | 4.33  | 3.27  | 4.65      | 386       | 17.8    | 300                            |
| 26631          | -   | -   | -    | -                | -   | 9                    | 3.94  | 3.46  | 4.86      | 324       | 14.5    | 21                             |
| 26632          | -   | -   | -    | -                | -   | 23                   | 3.73  | 3.41  | 4.80      | 312       | 21.0    | 41                             |
| 26633          | -   | -   | -    | -                | -   | 2                    | 2.69  | 3.25  | 4.97      | 231       | 27.7    | 7                              |
| 26634          | -   | -   | -    | -                | -   | 8                    | 3.92  | 3.31  | 4.84      | 409       | 24.0    | 19                             |
| 26642          | -   | -   | -    | -                | -   | 178                  | 3.59  | 3.21  | 4.90      | 307       | 17.7    | 180                            |
| 26648          | -   | -   | -    | -                | -   | 7                    | 3.51  | 3.12  | 4.70      | 729       | 18.5    | 18                             |
| 26651          | -   | -   | -    | -                | -   | 14                   | 4.70  | 3.54  | 4.81      | 146       | 16.3    | 28                             |
| 26652          | -   | -   | -    | -                | -   | 12                   | 3.45  | 3.26  | 4.89      | 174       | 14.2    | 26                             |
| 26690          | -   | -   | -    | -                | -   | 9                    | 3.55  | 3.26  | 4.89      | 143       | 10.3    | 21                             |
| 26691          | -   | -   | -    | -                | -   | 178                  | 3.90  | 3.27  | 4.91      | 206       | 11.2    | 180                            |
| 26765          | -   | -   | -    | -                | -   | 0                    | 3.97  | 3.09  | 4.85      | 194       | 19.7    | 2                              |

### Calculation of Bactocount from Total Plate Count (TPC)

The Bactocount machine at Mériex NutriSciences had broken down and so instead of a Bactocount reading, the staff did a TPC culture. Conversion from TPC to Bactocount is not precise unless a calibration is done for the total milk submitted from an area in the particular season. This is of course not possible. The Bactocount being reported here has been calculated from what we think is the most accurate conversion available. The formula used is:

$$\text{Bactocount} = 10^{(\log_{10}(\text{TPC}) - 1.4617)/0.7224)}$$

The source for this is: J. Anim. Sci. Vol. 88, Suppl. 1

[www.fass.org/2005/abstracts/05abs270.pdf](http://www.fass.org/2005/abstracts/05abs270.pdf)

and

<http://www.teses.usp.br/teses/disponiveis/11/11139/tde-26092005-164035/>