



**AAFCO**  
Proficiency Testing Program



**Animal Feed Scheme**  
**Milk Replacer, Medicated**  
**Test Material Code # 201723**

**Method Summary Report**  
(Precision Report Follows)

**# Methods Reported: 362**  
**# Labs Reporting: 198**  
**Issue Date : 04/30/2017**

| Method Code | Analyte and Method                        | Total # Labs Submitting | # Labs in Robust Calcs | Raw Mean | Raw SD  | Assigned Value - Robust Mean | AAFCO PT fp - Robust sd | Uncertainty (U) Robust | % RSD - Robust | Average Range (R-bar) | Horwitz %RSD |
|-------------|---|-------------------------|------------------------|----------|---------|------------------------------|-------------------------|------------------------|----------------|-----------------------|--------------|
| 000.02      | Urea, As protein, Colorimetric (%)        | 1                       | 1                      | 0.70000  |         |                              |                         |                        |                |                       |              |
| 001.00      | Loss on Drying, Vac 95°C 5 hr (%)         | 11                      | 11                     | 3.8805   | 0.91720 | 3.6961                       | 0.37652                 | 0.14190                | 10.19%         | 0.08509               | 3.29%        |
| 001.03      | Loss on Drying, Low temp. methods (%)     | 7                       | 6                      | 3.1967   | 0.78316 | 3.1991                       | 0.88251                 | 0.45035                | 27.59%         | 0.01263               | 3.36%        |
| 001.05      | Loss on Drying, LECO (%)                  | 2                       | 2                      | 4.1575   | 0.55508 |                              |                         |                        |                |                       |              |
| 001.07      | Loss on Drying, 104°C 3 hr, in malt (%)   | 46                      | 45                     | 4.0218   | 0.90870 | 3.8748                       | 0.27622                 | 0.05147                | 7.13%          | 0.09733               | 3.26%        |
| 001.08      | Loss on Drying, 102°C 16 hr, in meat (%)  | 2                       | 2                      | 4.2175   | 0.30759 |                              |                         |                        |                |                       |              |
| 001.99      | Loss on Drying, Miscellaneous (%)         | 20                      | 19                     | 3.8138   | 0.62428 | 3.8037                       | 0.46314                 | 0.13282                | 12.18%         | 0.12101               | 3.27%        |
| 002.00      | Protein, Crude (%)                        | 4                       | 4                      | 22.961   | 0.62449 | 22.961                       | 0.62449                 | 0.36055                | 2.72%          | 0.29250               | 2.09%        |
| 002.01      | Protein, Auto Kjel-Foss (%)               | 13                      | 13                     | 22.586   | 0.35712 | 22.586                       | 0.40353                 | 0.13990                | 1.79%          | 0.17423               | 2.10%        |
| 002.02      | Protein, Semiauto Autoanalyzer (%)        | 2                       | 2                      | 21.728   | 1.4401  |                              |                         |                        |                |                       |              |
| 002.04      | Protein, Copper Catalyst (%)              | 4                       | 4                      | 24.290   | 3.7443  | 24.290                       | 3.7443                  | 1.8722                 | 15.41%         | 0.21500               | 2.03%        |
| 002.05      | Protein, Copper, Boric Acid (%)           | 36                      | 35                     | 22.818   | 0.44767 | 22.840                       | 0.35145                 | 0.07426                | 1.54%          | 0.13037               | 2.09%        |
| 002.06      | Protein, Combustion Nitrogen Analyzer (%) | 123                     | 120                    | 23.144   | 0.82398 | 23.203                       | 0.30788                 | 0.03513                | 1.33%          | 0.22490               | 2.08%        |
| 002.07      | Protein, Block Digestion (%)              | 1                       | 1                      | 22.220   |         |                              |                         |                        |                |                       |              |
| 002.08      | Protein, Cu/Ti (%)                        | 3                       | 3                      | 23.009   | 0.19203 | 23.009                       | 0.19203                 | 0.11087                | 0.83%          | 0.39557               | 2.08%        |
| 002.10      | Protein, Block dig/distillation (%)       | 1                       | 1                      | 22.775   |         |                              |                         |                        |                |                       |              |
| 002.11      | Protein, NIR (%)                          | 3                       | 3                      | 24.234   | 2.0026  | 24.234                       | 2.0026                  | 1.1562                 | 8.26%          | 0.11500               | 2.03%        |
| 002.99      | Protein, Miscellaneous (%)                | 3                       | 3                      | 22.852   | 0.45941 | 22.852                       | 0.45941                 | 0.26524                | 2.01%          | 0.15000               | 2.09%        |
| 003.00      | Fat, Eth Ext., Direct (%)                 | 6                       | 6                      | 9.2456   | 6.6356  | 8.4335                       | 5.5409                  | 2.8276                 | 65.70%         | 0.25697               | 2.90%        |
| 003.06      | Fat, Pet Ether (%)                        | 12                      | 11                     | 6.7794   | 5.0515  | 5.4171                       | 0.97202                 | 0.36634                | 17.94%         | 0.19315               | 3.10%        |
| 003.09      | Fat, Soxtec, Eth Ext (%)                  | 8                       | 7                      | 7.6957   | 7.0011  | 5.3984                       | 1.3304                  | 0.62856                | 24.64%         | 0.05429               | 3.10%        |
| 003.10      | Fat, Soxtec, Pet Ether (%)                | 17                      | 17                     | 7.3753   | 7.8234  | 4.6512                       | 2.1019                  | 0.63724                | 45.19%         | 0.26143               | 3.17%        |
| 003.11      | Fat, NIR (%)                              | 3                       | 3                      | 17.372   | 11.995  | 17.372                       | 11.995                  | 6.9253                 | 69.05%         | 0.10333               | 2.40%        |
| 003.12      | Fat, Hexane Ext (%)                       | 4                       | 4                      | 14.172   | 8.5967  | 14.172                       | 8.5967                  | 4.9633                 | 60.66%         | 0.02425               | 2.66%        |
| 003.13      | Fat, Soxtec, Hexane Ext. (%)              | 3                       | 3                      | 6.3768   | 1.9249  | 6.3768                       | 1.9249                  | 1.1113                 | 30.19%         | 0.23500               | 3.03%        |
| 003.14      | Fat, Ankom (%)                            | 32                      | 32                     | 12.337   | 4.5115  | 11.969                       | 4.2952                  | 0.94911                | 35.89%         | 0.29847               | 2.75%        |
| 003.99      | Fat, Miscellaneous (%)                    | 7                       | 7                      | 16.777   | 8.3466  | 16.777                       | 9.4651                  | 4.4718                 | 56.42%         | 0.74857               | 2.44%        |
| 004.00      | Fiber, Crude, Asbestos Free (%)           | 15                      | 14                     | 0.91763  | 0.26695 | 0.87154                      | 0.18720                 | 0.06254                | 21.48%         | 0.09814               | 4.08%        |
| 004.01      | Fiber, Sing Filt (%)                      | 1                       | 1                      | 0.75000  |         |                              |                         |                        |                |                       |              |
| 004.03      | Fiber, Fritted Glass (%)                  | 4                       | 4                      | 0.82750  | 0.17081 | 0.82750                      | 0.17081                 | 0.08541                | 20.64%         | 0.16500               | 4.12%        |

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|-------------|--|-------------------------|------------------------|----------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------------|--------------|
| 004.06      | Fiber, Fibertec (%)                              | 21                      | 20                     | 1.1351   | 1.1148  | 0.84487                      | 0.22014                  | 0.06153                  | 26.06%         | 0.06406               | 4.10%        |
| 004.07      | Fiber, ANKOM (%)                                 | 45                      | 43                     | 1.0353   | 0.37864 | 1.0181                       | 0.36964                  | 0.07046                  | 36.31%         | 0.10637               | 3.99%        |
| 004.99      | Fiber, Miscellaneous (%)                         | 2                       | 2                      | 24.238   | 15.015  |                              |                          |                          |                |                       |              |
| 005.00      | Ash, 2h @ 600°C (%)                              | 96                      | 94                     | 10.093   | 0.18219 | 10.091                       | 0.14874                  | 0.01918                  | 1.47%          | 0.07590               | 2.82%        |
| 005.02      | Ash, LECO (%)                                    | 2                       | 2                      | 10.215   | 0.02121 |                              |                          |                          |                |                       |              |
| 005.04      | Ash, Acid insoluble (%)                          | 1                       | 1                      | 0.24000  |         |                              |                          |                          |                |                       |              |
| 005.05      | Ash, 3h @ 550°C (%)                              | 35                      | 34                     | 10.269   | 0.12462 | 10.268                       | 0.13928                  | 0.02986                  | 1.36%          | 0.04438               | 2.82%        |
| 005.11      | Ash, NIR (%)                                     | 2                       | 2                      | 9.6682   | 4.5281  |                              |                          |                          |                |                       |              |
| 005.99      | Ash, Miscellaneous (%)                           | 9                       | 9                      | 10.299   | 0.16436 | 10.299                       | 0.18594                  | 0.07748                  | 1.81%          | 0.05667               | 2.82%        |
| 006.00      | Total sugars, As sucrose (%)                     | 2                       | 2                      | 25.983   | 9.5848  |                              |                          |                          |                |                       |              |
| 006.01      | Total sugars, Mod. Fehling Soln (%)              | 2                       | 2                      | 24.498   | 3.1784  |                              |                          |                          |                |                       |              |
| 006.99      | Total sugars, Miscellaneous (%)                  | 2                       | 2                      | 26.600   | 4.1018  |                              |                          |                          |                |                       |              |
| 008.02      | Fiber, Acid Detergent (%)                        | 10                      | 10                     | 1.7504   | 1.6946  | 1.3091                       | 0.60306                  | 0.23838                  | 46.07%         | 0.15682               | 3.84%        |
| 008.05      | Fiber, Acid Detergent-Hach (%)                   | 1                       | 1                      | 2.6500   |         |                              |                          |                          |                |                       |              |
| 008.08      | Fiber, Acid Detergent, ANKOM (%)                 | 24                      | 24                     | 1.0640   | 0.45488 | 1.0564                       | 0.37732                  | 0.09627                  | 35.72%         | 0.14133               | 3.97%        |
| 008.99      | Fiber, Acid Detergent Miscellaneous (%)          | 1                       | 1                      | 1.7000   |         |                              |                          |                          |                |                       |              |
| 009.07      | Fiber, Neutral Det-ENZ Pretreat (%)              | 7                       | 7                      | 3.1452   | 2.6284  | 2.6048                       | 1.5649                   | 0.73936                  | 60.08%         | 0.21819               | 3.46%        |
| 009.09      | Fiber, Neutral Detergent, ANKOM (%)              | 23                      | 22                     | 1.4563   | 0.44686 | 1.4135                       | 0.32208                  | 0.08583                  | 22.78%         | 0.14903               | 3.80%        |
| 009.99      | Fiber, Neutral Det Miscellaneous (%)             | 1                       | 1                      | 1.7300   |         |                              |                          |                          |                |                       |              |
| 010.03      | Moisture, Karl-Fischer (%)                       | 3                       | 3                      | 3.6617   | 0.69456 | 3.6617                       | 0.69456                  | 0.40100                  | 18.97%         | 0.25000               | 3.29%        |
| 010.11      | Moisture, NIR (%)                                | 1                       | 1                      | 2.8311   |         |                              |                          |                          |                |                       |              |
| 010.99      | Moisture, Miscellaneous (%)                      | 16                      | 16                     | 4.4984   | 1.7263  | 4.1166                       | 0.73419                  | 0.22943                  | 17.83%         | 0.14813               | 3.23%        |
| 011.01      | Loss on Drying, 135°C 2hr (%)                    | 55                      | 54                     | 8.2736   | 2.2930  | 8.3597                       | 2.0725                   | 0.35253                  | 24.79%         | 0.18042               | 2.91%        |
| 011.02      | Loss on Drying, 130°C for 2 hours (%)            | 1                       | 1                      | 7.8450   |         |                              |                          |                          |                |                       |              |
| 011.99      | Loss on Drying, High Temp. Methods Miscellaneous | 5                       | 5                      | 5.7740   | 1.8472  | 5.7740                       | 1.8472                   | 0.82609                  | 31.99%         | 0.31600               | 3.07%        |
| 012.00      | Starch, Polarimetric (Ewers) (%)                 | 3                       | 3                      | 5.0767   | 3.7754  | 5.0767                       | 3.7754                   | 2.6696                   | 74.37%         | 1.0333                | 3.13%        |
| 012.01      | Starch, Megazyme (%)                             | 9                       | 8                      | 1.0059   | 0.69290 | 0.86843                      | 0.41433                  | 0.18311                  | 47.71%         | 0.13488               | 4.09%        |
| 012.03      | Starch, Enzymatic (%)                            | 3                       | 2                      | 0.82250  | 0.35709 | 0.82250                      | 0.35709                  |                          |                | 0.07500               | 4.12%        |
| 012.04      | Starch, YSI Analyzer (%)                         | 5                       | 5                      | 0.61800  | 0.24924 | 0.61800                      | 0.24924                  | 0.11146                  | 40.33%         | 0.11600               | 4.30%        |
| 012.11      | Starch, NIR (%)                                  | 1                       | 1                      | 0.01000  |         |                              |                          |                          |                |                       |              |
| 012.99      | Starch, Miscellaneous (%)                        | 1                       | 1                      | 31.820   |         |                              |                          |                          |                |                       |              |
| 013.00      | Fat, Acid hydrolysis (%)                         | 22                      | 21                     | 22.390   | 4.1472  | 23.198                       | 1.0027                   | 0.27351                  | 4.32%          | 0.18639               | 2.08%        |
| 013.02      | Fat, Mojonier, Bak Ext (%)                       | 19                      | 18                     | 23.779   | 1.4806  | 23.819                       | 0.73069                  | 0.21528                  | 3.07%          | 0.23308               | 2.05%        |
| 013.03      | Fat, Roese-Gottlieb (%)                          | 9                       | 9                      | 23.281   | 0.87236 | 23.281                       | 0.98925                  | 0.41219                  | 4.25%          | 0.38000               | 2.07%        |
| 013.08      | Fat, Roese-Gottlieb Modified (%)                 | 6                       | 5                      | 23.545   | 0.80734 | 23.545                       | 0.80734                  | 0.45132                  | 3.43%          | 0.16078               | 2.06%        |
| 013.10      | Fat, Soxtec-Acid Hydrolysis (%)                  | 6                       | 6                      | 22.215   | 0.43017 | 22.217                       | 0.48268                  | 0.24632                  | 2.17%          | 0.16125               | 2.12%        |
| 013.12      | Fat, NIR- Acid Hydrolysis (%)                    | 1                       | 1                      | 23.923   |         |                              |                          |                          |                |                       |              |
| 013.13      | Fat, Ankom- Acid Hydrolysis (%)                  | 10                      | 9                      | 22.884   | 0.40769 | 22.884                       | 0.46233                  | 0.19264                  | 2.02%          | 0.31000               | 2.09%        |

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|-------------|---|-------------------------|------------------------|----------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------------|--------------|
| 015.41      | Aluminum, ICP, Dry ash (mg / kg (ppm))        | 3                       | 3                      | 134.96   | 37.306  | 134.96                       | 37.306                   | 26.379                   | 27.64%         | 39.823                | 7.65%        |
| 015.42      | Aluminum, ICP, Open vessel (mg / kg (ppm))    | 1                       | 1                      | 106.25   |         |                              |                          |                          |                |                       |              |
| 015.43      | Aluminum, ICP, Microwave (mg / kg (ppm))      | 6                       | 6                      | 111.01   | 5.4708  | 110.88                       | 5.9128                   | 3.0174                   | 5.33%          | 4.3083                | 7.88%        |
| 015.52      | Aluminum, ICP-MS, Open vessel (mg / kg (ppm)) | 1                       | 1                      | 130.50   |         |                              |                          |                          |                |                       |              |
| 017.41      | Boron, ICP, Dry ash (mg / kg (ppm))           | 2                       | 2                      | 1.9450   | 0.33234 |                              |                          |                          |                |                       |              |
| 017.42      | Boron, ICP, Open vessel (mg / kg (ppm))       | 5                       | 5                      | 2.7530   | 0.56697 | 2.7530                       | 0.56697                  | 0.25356                  | 20.59%         | 0.14600               | 13.74%       |
| 017.43      | Boron, ICP, Microwave (mg / kg (ppm))         | 4                       | 4                      | 4.9813   | 3.3868  | 4.9813                       | 3.3868                   | 1.9554                   | 67.99%         | 0.58750               | 12.56%       |
| 019.00      | Calcium, Ox-Mn04 Vol. (%)                     | 15                      | 15                     | 1.6988   | 0.07272 | 1.7036                       | 0.07180                  | 0.02317                  | 4.21%          | 0.02540               | 3.69%        |
| 019.03      | Calcium, Semiauto (Autoanalyzer) (%)          | 1                       | 1                      | 1.7393   |         |                              |                          |                          |                |                       |              |
| 019.08      | Calcium, EDTA (%)                             | 8                       | 7                      | 1.6835   | 0.03642 | 1.6817                       | 0.03708                  | 0.01752                  | 2.20%          | 0.00910               | 3.70%        |
| 019.31      | Calcium, AAS, Dry ash (%)                     | 30                      | 29                     | 1.6978   | 0.10466 | 1.6893                       | 0.06153                  | 0.01428                  | 3.64%          | 0.03583               | 3.70%        |
| 019.32      | Calcium, AAS, Open vessel (%)                 | 5                       | 5                      | 1.7778   | 0.12239 | 1.7778                       | 0.12239                  | 0.06120                  | 6.88%          | 0.01720               | 3.67%        |
| 019.33      | Calcium, AAS, Microwave (%)                   | 2                       | 2                      | 1.7103   | 0.02157 |                              |                          |                          |                |                       |              |
| 019.41      | Calcium, ICP, Dry ash (%)                     | 24                      | 24                     | 1.7089   | 0.10651 | 1.7084                       | 0.08287                  | 0.02115                  | 4.85%          | 0.03566               | 3.69%        |
| 019.42      | Calcium, ICP, Open vessel (%)                 | 23                      | 22                     | 1.7349   | 0.16796 | 1.7531                       | 0.10742                  | 0.02863                  | 6.13%          | 0.04501               | 3.68%        |
| 019.43      | Calcium, ICP, Microwave (%)                   | 29                      | 29                     | 1.6722   | 0.10570 | 1.6794                       | 0.08864                  | 0.02057                  | 5.28%          | 0.03416               | 3.70%        |
| 019.44      | Calcium, ICP, Dry ash (%)                     | 2                       | 2                      | 1.7625   | 0.12374 |                              |                          |                          |                |                       |              |
| 019.51      | Calcium, ICP-MS, Dry ash (%)                  | 1                       | 1                      | 1.7545   |         |                              |                          |                          |                |                       |              |
| 019.52      | Calcium, ICP-MS, Open vessel (%)              | 3                       | 3                      | 1.6087   | 0.14334 | 1.6087                       | 0.14334                  | 0.08276                  | 8.91%          | 0.07240               | 3.72%        |
| 019.53      | Calcium, ICP-MS, Microwave (%)                | 3                       | 3                      | 1.6525   | 0.21927 | 1.6525                       | 0.21927                  | 0.12660                  | 13.27%         | 0.10833               | 3.71%        |
| 019.99      | Calcium, Miscellaneous (%)                    | 1                       | 1                      | 1.9350   |         |                              |                          |                          |                |                       |              |
| 021.31      | Cobalt, AAS, Dry ash (mg / kg (ppm))          | 2                       | 2                      | 0.42500  | 0.17678 |                              |                          |                          |                |                       |              |
| 021.32      | Cobalt, AAS, Open vessel (mg / kg (ppm))      | 1                       | 1                      | 0.65000  |         |                              |                          |                          |                |                       |              |
| 021.41      | Cobalt, ICP, Dry ash (mg / kg (ppm))          | 1                       | 1                      | 0.23550  |         |                              |                          |                          |                |                       |              |
| 021.42      | Cobalt, ICP, Open vessel (mg / kg (ppm))      | 2                       | 2                      | 0.28000  | 0.38184 |                              |                          |                          |                |                       |              |
| 021.43      | Cobalt, ICP, Microwave (mg / kg (ppm))        | 6                       | 6                      | 0.51483  | 0.18326 | 0.50181                      | 0.17671                  | 0.09018                  | 35.21%         | 0.04733               | 17.75%       |
| 021.52      | Cobalt, ICP-MS, Open vessel (mg / kg (ppm))   | 2                       | 2                      | 0.56150  | 0.22840 |                              |                          |                          |                |                       |              |
| 021.53      | Cobalt, ICP-MS, Microwave (mg / kg (ppm))     | 2                       | 2                      | 0.52963  | 0.21867 |                              |                          |                          |                |                       |              |
| 021.99      | Cobalt, Miscellaneous (mg / kg (ppm))         | 1                       | 1                      | 0.96500  |         |                              |                          |                          |                |                       |              |
| 022.31      | Copper, AAS, Dry ash (mg / kg (ppm))          | 11                      | 11                     | 12.285   | 4.2846  | 12.369                       | 4.6734                   | 1.7614                   | 37.78%         | 1.3176                | 10.96%       |
| 022.32      | Copper, AAS, Open vessel (mg / kg (ppm))      | 3                       | 3                      | 11.333   | 7.5222  | 11.333                       | 7.5222                   | 4.3429                   | 66.37%         | 0.66667               | 11.10%       |
| 022.33      | Copper, AAS, Microwave (mg / kg (ppm))        | 2                       | 2                      | 9.4550   | 4.1790  |                              |                          |                          |                |                       |              |
| 022.41      | Copper, ICP, Dry ash (mg / kg (ppm))          | 17                      | 17                     | 9.8846   | 3.6050  | 9.4488                       | 2.7618                   | 0.83728                  | 29.23%         | 1.5042                | 11.41%       |
| 022.42      | Copper, ICP, Open vessel (mg / kg (ppm))      | 16                      | 15                     | 7.4598   | 3.4200  | 7.4360                       | 3.6946                   | 1.1924                   | 49.69%         | 1.3950                | 11.83%       |
| 022.43      | Copper, ICP, Microwave (mg / kg (ppm))        | 20                      | 20                     | 9.9592   | 7.3687  | 8.4982                       | 4.1950                   | 1.1725                   | 49.36%         | 1.4698                | 11.59%       |
| 022.44      | Copper, ICP, Dry ash (mg / kg (ppm))          | 1                       | 1                      | 10.800   |         |                              |                          |                          |                |                       |              |
| 022.51      | Copper, ICP-MS, Dry ash (mg / kg (ppm))       | 1                       | 1                      | 12.045   |         |                              |                          |                          |                |                       |              |
| 022.52      | Copper, ICP-MS, Open vessel (mg / kg (ppm))   | 3                       | 3                      | 8.8633   | 1.3329  | 8.8633                       | 1.3329                   | 0.76955                  | 15.04%         | 5.4067                | 11.52%       |

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|-------------|--|-------------------------|------------------------|----------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------------|--------------|
| 022.53      | Copper, ICP-MS, Microwave (mg / kg (ppm))      | 2                       | 2                      | 7.8925   | 4.5361  |                              |                          |                          |                |                       |              |
| 022.99      | Copper, Miscellaneous (mg / kg (ppm))          | 3                       | 3                      | 5.7017   | 2.6797  | 5.7017                       | 2.6797                   | 1.5471                   | 47.00%         | 1.0033                | 12.31%       |
| 024.52      | Iodine, ICP-MS, Open vessel (mg / kg (ppm))    | 1                       | 1                      | 5.6950   |         |                              |                          |                          |                |                       |              |
| 024.53      | Iodine, ICP-MS, Microwave (mg / kg (ppm))      | 1                       | 1                      | 5.0050   |         |                              |                          |                          |                |                       |              |
| 025.31      | Iron, AAS, Dry ash (mg / kg (ppm))             | 14                      | 14                     | 193.14   | 33.237  | 195.15                       | 32.790                   | 10.954                   | 16.80%         | 16.501                | 7.23%        |
| 025.32      | Iron, AAS, Open vessel (mg / kg (ppm))         | 4                       | 4                      | 230.43   | 79.870  | 230.43                       | 79.870                   | 46.113                   | 34.66%         | 8.5000                | 7.05%        |
| 025.33      | Iron, AAS, Microwave (mg / kg (ppm))           | 2                       | 2                      | 181.98   | 36.028  |                              |                          |                          |                |                       |              |
| 025.41      | Iron, ICP, Dry ash (mg / kg (ppm))             | 20                      | 19                     | 170.00   | 48.566  | 181.14                       | 22.976                   | 6.5888                   | 12.68%         | 11.346                | 7.31%        |
| 025.42      | Iron, ICP, Open vessel (mg / kg (ppm))         | 16                      | 16                     | 176.54   | 57.633  | 172.77                       | 56.752                   | 17.735                   | 32.85%         | 30.005                | 7.37%        |
| 025.43      | Iron, ICP, Microwave (mg / kg (ppm))           | 21                      | 21                     | 162.05   | 36.434  | 162.88                       | 39.445                   | 10.760                   | 24.22%         | 15.663                | 7.43%        |
| 025.51      | Iron, ICP-MS, Dry ash (mg / kg (ppm))          | 1                       | 1                      | 196.90   |         |                              |                          |                          |                |                       |              |
| 025.52      | Iron, ICP-MS, Open vessel (mg / kg (ppm))      | 2                       | 2                      | 126.86   | 9.6980  |                              |                          |                          |                |                       |              |
| 025.53      | Iron, ICP-MS, Microwave (mg / kg (ppm))        | 1                       | 1                      | 154.00   |         |                              |                          |                          |                |                       |              |
| 025.99      | Iron, Miscellaneous (mg / kg (ppm))            | 1                       | 1                      | 224.00   |         |                              |                          |                          |                |                       |              |
| 027.31      | Magnesium, AAS, Dry ash (%)                    | 19                      | 19                     | 0.12306  | 0.00532 | 0.12331                      | 0.00544                  | 0.00156                  | 4.41%          | 0.00242               | 5.48%        |
| 027.32      | Magnesium, AAS, Open vessel (%)                | 4                       | 4                      | 0.12413  | 0.00733 | 0.12413                      | 0.00733                  | 0.00367                  | 5.91%          | 0.00475               | 5.48%        |
| 027.33      | Magnesium, AAS, Microwave (%)                  | 3                       | 3                      | 0.11950  | 0.00876 | 0.11950                      | 0.00876                  | 0.00506                  | 7.33%          | 0.00167               | 5.51%        |
| 027.41      | Magnesium, ICP, Dry ash (%)                    | 19                      | 19                     | 0.12419  | 0.04789 | 0.12071                      | 0.01054                  | 0.00302                  | 8.73%          | 0.00319               | 5.50%        |
| 027.42      | Magnesium, ICP, Open vessel (%)                | 20                      | 19                     | 0.12609  | 0.01231 | 0.12412                      | 0.00933                  | 0.00267                  | 7.51%          | 0.00521               | 5.48%        |
| 027.43      | Magnesium, ICP, Microwave (%)                  | 25                      | 24                     | 0.12264  | 0.01457 | 0.12245                      | 0.01354                  | 0.00346                  | 11.06%         | 0.00455               | 5.49%        |
| 027.44      | Magnesium, ICP, Dry ash (%)                    | 3                       | 3                      | 0.12517  | 0.00931 | 0.12517                      | 0.00931                  | 0.00538                  | 7.44%          | 0.00433               | 5.47%        |
| 027.52      | Magnesium, ICP-MS, Open vessel (%)             | 2                       | 2                      | 0.11550  | 0.00212 |                              |                          |                          |                |                       |              |
| 027.53      | Magnesium, ICP-MS, Microwave (%)               | 1                       | 1                      | 0.12500  |         |                              |                          |                          |                |                       |              |
| 027.99      | Magnesium, Miscellaneous (%)                   | 2                       | 2                      | 0.13000  | 0.01414 |                              |                          |                          |                |                       |              |
| 028.31      | Manganese, AAS, Dry ash (mg / kg (ppm))        | 12                      | 12                     | 46.554   | 4.7861  | 46.547                       | 5.4120                   | 1.9529                   | 11.63%         | 2.8433                | 8.97%        |
| 028.32      | Manganese, AAS, Open vessel (mg / kg (ppm))    | 4                       | 4                      | 51.480   | 5.2174  | 51.480                       | 5.2174                   | 2.6087                   | 10.13%         | 3.2650                | 8.84%        |
| 028.33      | Manganese, AAS, Microwave (mg / kg (ppm))      | 2                       | 2                      | 48.996   | 2.8224  |                              |                          |                          |                |                       |              |
| 028.41      | Manganese, ICP, Dry ash (mg / kg (ppm))        | 18                      | 18                     | 42.716   | 11.495  | 44.319                       | 6.4400                   | 1.8974                   | 14.53%         | 3.0983                | 9.04%        |
| 028.42      | Manganese, ICP, Open vessel (mg / kg (ppm))    | 19                      | 19                     | 47.570   | 6.7980  | 46.999                       | 6.1060                   | 1.7510                   | 12.99%         | 4.0915                | 8.96%        |
| 028.43      | Manganese, ICP, Microwave (mg / kg (ppm))      | 21                      | 21                     | 48.816   | 6.5091  | 48.765                       | 5.0146                   | 1.3679                   | 10.28%         | 4.1429                | 8.91%        |
| 028.44      | Manganese, ICP, Dry ash (mg / kg (ppm))        | 1                       | 1                      | 55.300   |         |                              |                          |                          |                |                       |              |
| 028.51      | Manganese, ICP-MS, Dry ash (mg / kg (ppm))     | 1                       | 1                      | 42.215   |         |                              |                          |                          |                |                       |              |
| 028.52      | Manganese, ICP-MS, Open vessel (mg / kg (ppm)) | 1                       | 1                      | 54.850   |         |                              |                          |                          |                |                       |              |
| 028.53      | Manganese, ICP-MS, Microwave (mg / kg (ppm))   | 1                       | 1                      | 56.450   |         |                              |                          |                          |                |                       |              |
| 028.99      | Manganese, Miscellaneous (mg / kg (ppm))       | 2                       | 2                      | 53.250   | 5.3033  |                              |                          |                          |                |                       |              |
| 031.00      | Phosphorus, Vol (%)                            | 2                       | 2                      | 0.73650  | 0.05445 |                              |                          |                          |                |                       |              |
| 031.01      | Phosphorus, Photometric (%)                    | 47                      | 46                     | 0.76923  | 0.05494 | 0.76295                      | 0.02708                  | 0.00499                  | 3.55%          | 0.01177               | 4.17%        |
| 031.02      | Phosphorus, GQMP (AOAC 935.13-Extraction) (%)  | 3                       | 3                      | 0.78667  | 0.01443 | 0.78667                      | 0.01443                  | 0.01020                  | 1.83%          | 0.00667               | 4.15%        |

| Method Code | Analyte and Method                            | Total # Labs Submitting | # Labs in Robust Calcs | Raw Mean | Raw SD  | Assigned Value - Robust Mean | AAFCO PT ffp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Average Range (R-bar) | Horwitz %RSD |
|-------------|---|-------------------------|------------------------|----------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------------|--------------|
| 031.03      | Phosphorus, Autoanalyzer (%)                  | 4                       | 4                      | 0.76836  | 0.01417 | 0.76836                      | 0.01417                  | 0.00709                  | 1.84%          | 0.00768               | 4.16%        |
| 031.41      | Phosphorus, ICP, Dry ash (%)                  | 23                      | 22                     | 0.76851  | 0.05829 | 0.76503                      | 0.04367                  | 0.01164                  | 5.71%          | 0.01440               | 4.16%        |
| 031.42      | Phosphorus, ICP, Open vessel (%)              | 23                      | 23                     | 0.76507  | 0.05880 | 0.76875                      | 0.04904                  | 0.01278                  | 6.38%          | 0.01783               | 4.16%        |
| 031.43      | Phosphorus, ICP, Microwave (%)                | 27                      | 26                     | 0.77340  | 0.04203 | 0.77714                      | 0.03594                  | 0.00881                  | 4.62%          | 0.01513               | 4.15%        |
| 031.44      | Phosphorus, ICP, Dry ash (%)                  | 3                       | 3                      | 0.73490  | 0.05055 | 0.73490                      | 0.05055                  | 0.02919                  | 6.88%          | 0.00647               | 4.19%        |
| 031.51      | Phosphorus, ICP-MS, Dry ash (%)               | 1                       | 1                      | 0.77400  |         |                              |                          |                          |                |                       |              |
| 031.52      | Phosphorus, ICP-MS, Open vessel (%)           | 2                       | 2                      | 0.76613  | 0.00124 |                              |                          |                          |                |                       |              |
| 031.53      | Phosphorus, ICP-MS, Microwave (%)             | 2                       | 2                      | 0.78615  | 0.01888 |                              |                          |                          |                |                       |              |
| 031.99      | Phosphorus, Miscellaneous (%)                 | 3                       | 3                      | 0.78333  | 0.05058 | 0.78333                      | 0.05058                  | 0.02920                  | 6.46%          | 0.00667               | 4.15%        |
| 032.02      | Potassium, Flame Emission (%)                 | 2                       | 2                      | 2.0670   | 0.00990 |                              |                          |                          |                |                       |              |
| 032.31      | Potassium, AAS, Dry ash (%)                   | 21                      | 20                     | 2.1223   | 0.40292 | 2.0595                       | 0.18305                  | 0.05116                  | 8.89%          | 0.05089               | 3.59%        |
| 032.32      | Potassium, AAS, Open vessel (%)               | 3                       | 3                      | 2.1417   | 0.24023 | 2.1417                       | 0.24023                  | 0.16987                  | 11.22%         | 0.01000               | 3.57%        |
| 032.33      | Potassium, AAS, Microwave (%)                 | 1                       | 1                      | 2.1500   |         |                              |                          |                          |                |                       |              |
| 032.41      | Potassium, ICP, Dry ash (%)                   | 20                      | 20                     | 1.9082   | 0.44625 | 2.0122                       | 0.12759                  | 0.03566                  | 6.34%          | 0.05600               | 3.60%        |
| 032.42      | Potassium, ICP, Open vessel (%)               | 20                      | 20                     | 2.0960   | 0.11957 | 2.0865                       | 0.11232                  | 0.03140                  | 5.38%          | 0.05062               | 3.58%        |
| 032.43      | Potassium, ICP, Microwave (%)                 | 25                      | 24                     | 2.0114   | 0.10678 | 2.0019                       | 0.07841                  | 0.02001                  | 3.92%          | 0.04330               | 3.60%        |
| 032.44      | Potassium, ICP, Dry ash (%)                   | 3                       | 3                      | 1.8833   | 0.27301 | 1.8833                       | 0.27301                  | 0.15762                  | 14.50%         | 0.10667               | 3.64%        |
| 032.52      | Potassium, ICP-MS, Open vessel (%)            | 2                       | 2                      | 2.0369   | 0.01686 |                              |                          |                          |                |                       |              |
| 032.53      | Potassium, ICP-MS, Microwave (%)              | 2                       | 2                      | 1.9650   | 0.37477 |                              |                          |                          |                |                       |              |
| 032.99      | Potassium, Miscellaneous (%)                  | 1                       | 1                      | 2.0700   |         |                              |                          |                          |                |                       |              |
| 033.00      | Salt as chloride, Sol Cl (%)                  | 19                      | 18                     | 1.8120   | 0.12741 | 1.7959                       | 0.09913                  | 0.02921                  | 5.52%          | 0.02161               | 3.66%        |
| 033.01      | Salt as chloride, Poten Cl (%)                | 24                      | 23                     | 1.8185   | 0.05475 | 1.8127                       | 0.03994                  | 0.01041                  | 2.20%          | 0.02476               | 3.66%        |
| 033.03      | Salt as chloride, Quantab (%)                 | 2                       | 2                      | 1.6075   | 0.15910 |                              |                          |                          |                |                       |              |
| 033.05      | Salt as chloride, Ion Sel Electrode (%)       | 1                       | 1                      | 1.7600   |         |                              |                          |                          |                |                       |              |
| 033.99      | Salt, Miscellaneous (%)                       | 3                       | 3                      | 1.7250   | 0.11715 | 1.7250                       | 0.11715                  | 0.08284                  | 6.79%          | 0.05667               | 3.68%        |
| 034.01      | Selenium, Fluor (mg / kg (ppm))               | 2                       | 2                      | 0.57125  | 0.03995 |                              |                          |                          |                |                       |              |
| 034.04      | Selenium, AA, Hydride (mg / kg (ppm))         | 6                       | 6                      | 0.60247  | 0.16211 | 0.60247                      | 0.18383                  | 0.09381                  | 30.51%         | 0.05420               | 17.26%       |
| 034.41      | Selenium, ICP, Dry ash (mg / kg (ppm))        | 1                       | 1                      | 0.56850  |         |                              |                          |                          |                |                       |              |
| 034.42      | Selenium, ICP, Open vessel (mg / kg (ppm))    | 1                       | 1                      | 1.0000   |         |                              |                          |                          |                |                       |              |
| 034.43      | Selenium, ICP, Microwave (mg / kg (ppm))      | 2                       | 2                      | 0.79273  | 0.32849 |                              |                          |                          |                |                       |              |
| 034.52      | Selenium, ICP-MS, Open vessel (mg / kg (ppm)) | 5                       | 5                      | 0.58280  | 0.09127 | 0.58280                      | 0.09127                  | 0.04082                  | 15.66%         | 0.06440               | 17.35%       |
| 034.53      | Selenium, ICP-MS, Microwave (mg / kg (ppm))   | 2                       | 2                      | 0.66768  | 0.07400 |                              |                          |                          |                |                       |              |
| 035.01      | Sodium, Ion-selective electrode (%)           | 2                       | 2                      | 0.66850  | 0.04738 |                              |                          |                          |                |                       |              |
| 035.05      | Sodium, Flame Emission (%)                    | 4                       | 4                      | 0.70050  | 0.05771 | 0.70050                      | 0.05771                  | 0.03332                  | 8.24%          | 0.02850               | 4.22%        |
| 035.31      | Sodium, AAS, Dry ash (%)                      | 21                      | 21                     | 0.69008  | 0.09399 | 0.67519                      | 0.06481                  | 0.01768                  | 9.60%          | 0.02020               | 4.24%        |
| 035.32      | Sodium, AAS, Open vessel (%)                  | 3                       | 3                      | 0.58633  | 0.07550 | 0.58633                      | 0.07550                  | 0.04359                  | 12.88%         | 0.00800               | 4.33%        |
| 035.33      | Sodium, AAS, Microwave (%)                    | 1                       | 1                      | 0.65000  |         |                              |                          |                          |                |                       |              |
| 035.41      | Sodium, ICP, Dry ash (%)                      | 20                      | 19                     | 0.64447  | 0.06306 | 0.65348                      | 0.03936                  | 0.01129                  | 6.02%          | 0.01605               | 4.26%        |

| Method Code | Analyte and Method                                | Total # Labs Submitting | # Labs in Robust Calcs | Raw Mean | Raw SD  | Assigned Value - Robust Mean | AAFCO PT ffp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Average Range (R-bar) | Horwitz %RSD |
|-------------|---|-------------------------|------------------------|----------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------------|--------------|
| 035.42      | Sodium, ICP, Open vessel (%)                      | 19                      | 18                     | 0.66805  | 0.04675 | 0.66867                      | 0.05168                  | 0.01523                  | 7.73%          | 0.00884               | 4.25%        |
| 035.43      | Sodium, ICP, Microwave (%)                        | 26                      | 25                     | 0.64855  | 0.05465 | 0.64441                      | 0.04223                  | 0.01056                  | 6.55%          | 0.00951               | 4.27%        |
| 035.52      | Sodium, ICP-MS, Open vessel (%)                   | 2                       | 2                      | 0.68845  | 0.00488 |                              |                          |                          |                |                       |              |
| 035.53      | Sodium, ICP-MS, Microwave (%)                     | 2                       | 2                      | 0.68225  | 0.00530 |                              |                          |                          |                |                       |              |
| 035.99      | Sodium, Miscellaneous (%)                         | 4                       | 4                      | 0.65800  | 0.03981 | 0.65800                      | 0.03981                  | 0.01991                  | 6.05%          | 0.00600               | 4.26%        |
| 036.00      | Sulfur, Gravimetric (%)                           | 1                       | 1                      | 0.35800  |         |                              |                          |                          |                |                       |              |
| 036.04      | Sulfur, LECO (%)                                  | 2                       | 2                      | 0.34000  | 0.00707 |                              |                          |                          |                |                       |              |
| 036.42      | Sulfur, ICP, Open vessel (%)                      | 18                      | 18                     | 0.36657  | 0.02662 | 0.36705                      | 0.02504                  | 0.00738                  | 6.82%          | 0.00732               | 4.65%        |
| 036.43      | Sulfur, ICP, Microwave (%)                        | 15                      | 14                     | 0.36682  | 0.02661 | 0.36589                      | 0.02283                  | 0.00763                  | 6.24%          | 0.01266               | 4.65%        |
| 036.52      | Sulfur, ICP-MS, Open vessel (%)                   | 2                       | 2                      | 0.35750  | 0.01131 |                              |                          |                          |                |                       |              |
| 036.53      | Sulfur, ICP-MS, Microwave (%)                     | 1                       | 1                      | 0.53000  |         |                              |                          |                          |                |                       |              |
| 037.31      | Zinc, AAS, Dry ash (mg / kg (ppm))                | 12                      | 11                     | 82.262   | 11.971  | 80.764                       | 9.5771                   | 3.6095                   | 11.86%         | 4.3697                | 8.26%        |
| 037.32      | Zinc, AAS, Open vessel (mg / kg (ppm))            | 3                       | 3                      | 87.975   | 23.714  | 87.975                       | 23.714                   | 13.691                   | 26.96%         | 2.8833                | 8.15%        |
| 037.33      | Zinc, AAS, Microwave (mg / kg (ppm))              | 2                       | 2                      | 118.96   | 7.8400  |                              |                          |                          |                |                       |              |
| 037.41      | Zinc, ICP, Dry ash (mg / kg (ppm))                | 17                      | 16                     | 78.721   | 22.394  | 81.945                       | 15.159                   | 4.7371                   | 18.50%         | 8.1821                | 8.24%        |
| 037.42      | Zinc, ICP, Open vessel (mg / kg (ppm))            | 19                      | 19                     | 78.407   | 13.585  | 78.636                       | 14.469                   | 4.1492                   | 18.40%         | 7.7661                | 8.29%        |
| 037.43      | Zinc, ICP, Microwave (mg / kg (ppm))              | 23                      | 23                     | 86.071   | 18.217  | 83.803                       | 13.578                   | 3.5389                   | 16.20%         | 4.6132                | 8.21%        |
| 037.44      | Zinc, ICP, Dry ash (mg / kg (ppm))                | 2                       | 2                      | 74.616   | 13.210  |                              |                          |                          |                |                       |              |
| 037.51      | Zinc, ICP-MS, Dry ash (mg / kg (ppm))             | 1                       | 1                      | 72.655   |         |                              |                          |                          |                |                       |              |
| 037.52      | Zinc, ICP-MS, Open vessel (mg / kg (ppm))         | 2                       | 2                      | 81.735   | 3.5567  |                              |                          |                          |                |                       |              |
| 037.53      | Zinc, ICP-MS, Microwave (mg / kg (ppm))           | 1                       | 1                      | 81.450   |         |                              |                          |                          |                |                       |              |
| 037.99      | Zinc, Miscellaneous (mg / kg (ppm))               | 3                       | 3                      | 82.257   | 4.9089  | 82.257                       | 4.9089                   | 2.8342                   | 5.97%          | 7.6867                | 8.24%        |
| 038.42      | Molybdenum, ICP, Open vessel (mg / kg (ppm))      | 3                       | 3                      | 0.80167  | 0.07320 | 0.80167                      | 0.07320                  | 0.05176                  | 9.13%          | 0.03000               | 16.54%       |
| 038.43      | Molybdenum, ICP, Microwave (mg / kg (ppm))        | 5                       | 5                      | 0.77365  | 0.27534 | 0.77365                      | 0.27534                  | 0.13767                  | 35.59%         | 0.02882               | 16.63%       |
| 038.52      | Molybdenum, ICP-MS, Open vessel (mg / kg (ppm))   | 2                       | 2                      | 0.69600  | 0.09334 |                              |                          |                          |                |                       |              |
| 038.53      | Molybdenum, ICP-MS, Microwave (mg / kg (ppm))     | 2                       | 2                      | 0.66583  | 0.14259 |                              |                          |                          |                |                       |              |
| 040.42      | Barium, ICP, Open vessel (mg / kg (ppm))          | 1                       | 1                      | 1.1300   |         |                              |                          |                          |                |                       |              |
| 040.53      | Barium, ICP-MS, Microwave (mg / kg (ppm))         | 1                       | 1                      | 1.0250   |         |                              |                          |                          |                |                       |              |
| 042.00      | Chloride, Titrimetric (%)                         | 2                       | 2                      | 1.1078   | 0.00389 |                              |                          |                          |                |                       |              |
| 101.00      | Choline Chloride, Microbiological (mg / kg (ppm)) | 1                       | 1                      | 2,920.0  |         |                              |                          |                          |                |                       |              |
| 101.01      | Choline Chloride, Chem (mg / kg (ppm))            | 1                       | 1                      | 1,995.0  |         |                              |                          |                          |                |                       |              |
| 101.02      | Choline Chloride, LC (mg / kg (ppm))              | 2                       | 2                      | 2,051.8  | 1,249.1 |                              |                          |                          |                |                       |              |
| 102.01      | Niacin, Microbiological (mg / kg (ppm))           | 1                       | 1                      | 45.750   |         |                              |                          |                          |                |                       |              |
| 102.02      | Niacin, LC (mg / kg (ppm))                        | 1                       | 1                      | 19.825   |         |                              |                          |                          |                |                       |              |
| 102.99      | Niacin, Miscellaneous (mg / kg (ppm))             | 1                       | 1                      | 20.400   |         |                              |                          |                          |                |                       |              |
| 103.01      | Pantothenic Acid, Microbiological (mg / kg (ppm)) | 1                       | 1                      | 66.400   |         |                              |                          |                          |                |                       |              |
| 103.02      | Pantothenic Acid, LC (mg / kg (ppm))              | 1                       | 1                      | 69.675   |         |                              |                          |                          |                |                       |              |
| 103.99      | Pantothenic Acid, Miscellaneous (mg / kg (ppm))   | 1                       | 1                      | 78.450   |         |                              |                          |                          |                |                       |              |

| Method Code | Analyte and Method                               | Total # Labs Submitting | # Labs in Robust Calcs | Raw Mean | Raw SD  | Assigned Value - Robust Mean | AAFCO PT ffp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Average Range (R-bar) | Horwitz %RSD |
|-------------|--|-------------------------|------------------------|----------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------------|--------------|
| 104.00      | Riboflavin, Fluorometric (mg / kg (ppm))         | 2                       | 2                      | 9.7750   | 0.20506 |                              |                          |                          |                |                       |              |
| 104.03      | Riboflavin, LC (mg / kg (ppm))                   | 1                       | 1                      | 8.7000   |         |                              |                          |                          |                |                       |              |
| 104.99      | Riboflavin, Miscellaneous (mg / kg (ppm))        | 1                       | 1                      | 11.340   |         |                              |                          |                          |                |                       |              |
| 105.00      | Thiamine, LC (mg / kg (ppm))                     | 4                       | 4                      | 9.0625   | 3.0319  | 9.0625                       | 3.0319                   | 1.5160                   | 33.46%         | 0.41500               | 11.48%       |
| 105.01      | Thiamine, Fluorometer (mg / kg (ppm))            | 1                       | 1                      | 9.7950   |         |                              |                          |                          |                |                       |              |
| 106.00      | Vitamin A, Color (KU / kg)                       | 3                       | 3                      | 41.803   | 17.071  | 41.803                       | 17.071                   | 9.8559                   | 40.84%         | 4.4026                |              |
| 106.01      | Vitamin A, UV (KU / kg)                          | 2                       | 2                      | 40.275   | 5.4094  |                              |                          |                          |                |                       |              |
| 106.02      | Vitamin A, LC (KU / kg)                          | 21                      | 20                     | 40.666   | 9.0371  | 41.158                       | 7.6595                   | 2.1409                   | 18.61%         | 3.1881                |              |
| 107.00      | Vitamin B12, Microbiological (µg / kg (ppb))     | 1                       | 1                      | 96.200   |         |                              |                          |                          |                |                       |              |
| 108.02      | Vitamin D3, LC (KU / kg)                         | 8                       | 8                      | 9.3509   | 3.8094  | 10.075                       | 2.3817                   | 1.0526                   | 23.64%         | 0.77125               |              |
| 108.99      | Vitamin D3, Miscellaneous (KU / kg)              | 2                       | 2                      | 6.8250   | 6.1165  |                              |                          |                          |                |                       |              |
| 109.02      | Vitamin E, LC (IU/kg)                            | 19                      | 18                     | 232.83   | 93.516  | 238.41                       | 91.827                   | 27.055                   | 38.52%         | 15.993                |              |
| 109.99      | Vitamin E, Miscellaneous (IU/kg)                 | 2                       | 2                      | 305.44   | 56.479  |                              |                          |                          |                |                       |              |
| 111.01      | Vitamin C, Ascorbic Acid, LC (mkg/kg (ppm))      | 2                       | 1                      | 75.945   |         |                              |                          |                          |                |                       |              |
| 111.98      | Vitamin C, Ascorbic Acid, Miscellaneous (mkg/kg) | 1                       | 1                      | 49.150   |         |                              |                          |                          |                |                       |              |
| 112.01      | Pyridoxine, LC (µg / g)                          | 1                       | 1                      | 59.050   |         |                              |                          |                          |                |                       |              |
| 112.99      | Pyridoxine, Miscellaneous (µg / g)               | 1                       | 1                      | 2.4330   |         |                              |                          |                          |                |                       |              |
| 113.01      | Folic Acid, Micro (mg / kg (ppm))                | 1                       | 1                      | 1.3850   |         |                              |                          |                          |                |                       |              |
| 113.02      | Folic acid, LC (mg / kg (ppm))                   | 1                       | 1                      | 0.64000  |         |                              |                          |                          |                |                       |              |
| 113.99      | Folic acid, Miscellaneous (mg / kg (ppm))        | 1                       | 1                      | 0.75000  |         |                              |                          |                          |                |                       |              |
| 114.01      | Biotin, Microbiological (mg / kg (ppm))          | 1                       | 1                      | 0.31850  |         |                              |                          |                          |                |                       |              |
| 114.99      | Biotin, Miscellaneous (mg / kg (ppm))            | 1                       | 1                      | 0.52000  |         |                              |                          |                          |                |                       |              |
| 120.00      | Alanine, Post-col Ninhydrin Der (%)              | 18                      | 18                     | 1.1125   | 0.03102 | 1.1122                       | 0.02972                  | 0.00876                  | 2.67%          | 0.02079               | 3.94%        |
| 120.02      | Alanine, Post-col OPA Der (%)                    | 1                       | 1                      | 1.1420   |         |                              |                          |                          |                |                       |              |
| 120.05      | Alanine, Pre-col AQC Der (%)                     | 4                       | 4                      | 1.0680   | 0.04481 | 1.0680                       | 0.04481                  | 0.02241                  | 4.20%          | 0.02700               | 3.96%        |
| 120.99      | Alanine, Miscellaneous (%)                       | 2                       | 2                      | 1.0575   | 0.01768 |                              |                          |                          |                |                       |              |
| 121.00      | Arginine, Post-col Ninhydrin Der (%)             | 18                      | 17                     | 0.59621  | 0.02028 | 0.59621                      | 0.02299                  | 0.00697                  | 3.86%          | 0.01069               | 4.32%        |
| 121.02      | Arginine, Post-col OPA Der (%)                   | 1                       | 1                      | 0.62600  |         |                              |                          |                          |                |                       |              |
| 121.05      | Arginine, Pre-col AQC Der (%)                    | 4                       | 4                      | 0.61400  | 0.02811 | 0.61400                      | 0.02811                  | 0.01406                  | 4.58%          | 0.01650               | 4.30%        |
| 121.99      | Arginine, Miscellaneous (%)                      | 1                       | 1                      | 0.46000  |         |                              |                          |                          |                |                       |              |
| 122.00      | Aspartic, Post-col Ninhydrin Der (%)             | 18                      | 18                     | 2.4310   | 0.06263 | 2.4259                       | 0.05474                  | 0.01613                  | 2.26%          | 0.03861               | 3.50%        |
| 122.02      | Aspartic, Post-col OPA Der (%)                   | 1                       | 1                      | 2.4335   |         |                              |                          |                          |                |                       |              |
| 122.05      | Aspartic, Pre-col AQC Der (%)                    | 4                       | 4                      | 2.4416   | 0.12377 | 2.4416                       | 0.12377                  | 0.06189                  | 5.07%          | 0.07225               | 3.50%        |
| 122.99      | Aspartic, Miscellaneous (%)                      | 2                       | 2                      | 2.3820   | 0.03111 |                              |                          |                          |                |                       |              |
| 124.00      | Cysteine/Cystine, PAO Post-col Ninhytri (%)      | 18                      | 18                     | 0.51484  | 0.03228 | 0.51523                      | 0.02604                  | 0.00767                  | 5.05%          | 0.01222               | 4.42%        |
| 124.02      | Cysteine/Cystine, PAO Post-col OPA Der (%)       | 1                       | 1                      | 0.53150  |         |                              |                          |                          |                |                       |              |
| 124.05      | Cysteine/Cystine, PAO Pre-col AQC Der (%)        | 3                       | 3                      | 0.47433  | 0.14827 | 0.47433                      | 0.14827                  | 0.08560                  | 31.26%         | 0.01333               | 4.47%        |
| 124.99      | Cysteine/Cystine, Miscellaneous (%)              | 1                       | 1                      | 0.66500  |         |                              |                          |                          |                |                       |              |

| Method Code | Analyte and Method                         | Total # Labs Submitting | # Labs in Robust Calcs | Raw Mean | Raw SD  | Assigned Value - Robust Mean | AAFCO PT ffp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Average Range (R-bar) | Horwitz %RSD |
|-------------|--|-------------------------|------------------------|----------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------------|--------------|
| 125.00      | Glutamic, Post-col Ninhydrin Der (%)       | 18                      | 18                     | 4.0247   | 0.11214 | 4.0226                       | 0.11864                  | 0.03495                  | 2.95%          | 0.06095               | 3.24%        |
| 125.02      | Glutamic, Post-col OPA Der (%)             | 1                       | 1                      | 4.0445   |         |                              |                          |                          |                |                       |              |
| 125.05      | Glutamic, Pre-col AQC Der (%)              | 4                       | 4                      | 4.0604   | 0.11970 | 4.0604                       | 0.11970                  | 0.05985                  | 2.95%          | 0.09925               | 3.24%        |
| 125.99      | Glutamic, Miscellaneous (%)                | 2                       | 2                      | 4.0488   | 0.10076 |                              |                          |                          |                |                       |              |
| 126.00      | Glycine, Post-col Ninhydrin Der (%)        | 18                      | 18                     | 0.45916  | 0.01432 | 0.46006                      | 0.01123                  | 0.00331                  | 2.44%          | 0.00803               | 4.50%        |
| 126.02      | Glycine, Post-col OPA Der (%)              | 1                       | 1                      | 0.44700  |         |                              |                          |                          |                |                       |              |
| 126.05      | Glycine, Pre-col AQC Der (%)               | 4                       | 4                      | 0.48738  | 0.03652 | 0.48738                      | 0.03652                  | 0.02108                  | 7.49%          | 0.00875               | 4.46%        |
| 126.99      | Glycine, Miscellaneous (%)                 | 2                       | 2                      | 0.44025  | 0.03571 |                              |                          |                          |                |                       |              |
| 127.00      | Histidine, Post-col Ninhydrin Der (%)      | 17                      | 17                     | 0.44360  | 0.02083 | 0.44218                      | 0.01867                  | 0.00566                  | 4.22%          | 0.01198               | 4.52%        |
| 127.02      | Histidine, Post-col OPA Der (%)            | 1                       | 1                      | 0.43850  |         |                              |                          |                          |                |                       |              |
| 127.05      | Histidine, Pre-col AQC Der (%)             | 4                       | 4                      | 0.44775  | 0.02153 | 0.44775                      | 0.02153                  | 0.01077                  | 4.81%          | 0.00950               | 4.51%        |
| 127.99      | Histidine, Miscellaneous (%)               | 2                       | 2                      | 0.48525  | 0.12056 |                              |                          |                          |                |                       |              |
| 128.00      | Isoleucine, Post-col Ninhydrin Der (%)     | 18                      | 18                     | 1.3689   | 0.03267 | 1.3718                       | 0.03018                  | 0.00889                  | 2.20%          | 0.02478               | 3.81%        |
| 128.02      | Isoleucine, Post-col OPA Der (%)           | 1                       | 1                      | 1.4135   |         |                              |                          |                          |                |                       |              |
| 128.05      | Isoleucine, Pre-col AQC Der (%)            | 4                       | 4                      | 1.3510   | 0.10771 | 1.3510                       | 0.10771                  | 0.05386                  | 7.97%          | 0.02800               | 3.82%        |
| 128.99      | Isoleucine, Miscellaneous (%)              | 2                       | 2                      | 1.2825   | 0.10960 |                              |                          |                          |                |                       |              |
| 129.00      | Leucine, Post-col Ninhydrin Der (%)        | 18                      | 18                     | 2.3483   | 0.04920 | 2.3491                       | 0.05358                  | 0.01579                  | 2.28%          | 0.02738               | 3.52%        |
| 129.02      | Leucine, Post-col OPA Der (%)              | 1                       | 1                      | 2.4035   |         |                              |                          |                          |                |                       |              |
| 129.05      | Leucine, Pre-col AQC Der (%)               | 4                       | 4                      | 2.4799   | 0.11011 | 2.4799                       | 0.11011                  | 0.06357                  | 4.44%          | 0.17475               | 3.49%        |
| 129.99      | Leucine, Miscellaneous (%)                 | 2                       | 2                      | 2.2515   | 0.22840 |                              |                          |                          |                |                       |              |
| 130.00      | L-Lysine, Post-col Ninhydrin Der (%)       | 20                      | 19                     | 2.2101   | 0.13153 | 2.2061                       | 0.13486                  | 0.03867                  | 6.11%          | 0.06496               | 3.55%        |
| 130.01      | L-Lysine, Pre-col OPA Der (%)              | 1                       | 1                      | 2.0050   |         |                              |                          |                          |                |                       |              |
| 130.02      | L-Lysine, Post-col OPA Der (%)             | 1                       | 1                      | 2.1330   |         |                              |                          |                          |                |                       |              |
| 130.05      | L-Lysine, Pre-col AQC Der (%)              | 7                       | 7                      | 2.1939   | 0.13812 | 2.1939                       | 0.15663                  | 0.07400                  | 7.14%          | 0.17614               | 3.55%        |
| 130.99      | L-Lysine, Miscellaneous (%)                | 4                       | 4                      | 2.0974   | 0.21441 | 2.0974                       | 0.21441                  | 0.10721                  | 10.22%         | 0.22028               | 3.58%        |
| 131.00      | Methionine, PAO Post-col Ninhydrin Der (%) | 18                      | 17                     | 0.47311  | 0.03329 | 0.47398                      | 0.02355                  | 0.00714                  | 4.97%          | 0.01606               | 4.48%        |
| 131.02      | Methionine, PAO Post-col OPA Der (%)       | 1                       | 1                      | 0.43150  |         |                              |                          |                          |                |                       |              |
| 131.05      | Methionine, PAO Pre-col AQC Der (%)        | 3                       | 3                      | 0.50633  | 0.05312 | 0.50633                      | 0.05312                  | 0.03067                  | 10.49%         | 0.02800               | 4.43%        |
| 131.99      | Methionine, Miscellaneous (%)              | 3                       | 3                      | 0.60350  | 0.27123 | 0.60350                      | 0.27123                  | 0.15659                  | 44.94%         | 0.05967               | 4.32%        |
| 132.00      | Phenylalanine, Post-col Ninhydrin Der (%)  | 18                      | 17                     | 0.76941  | 0.02778 | 0.76721                      | 0.02537                  | 0.00769                  | 3.31%          | 0.01215               | 4.16%        |
| 132.02      | Phenylalanine, Post-col OPA Der (%)        | 1                       | 1                      | 0.76900  |         |                              |                          |                          |                |                       |              |
| 132.05      | Phenylalanine, Pre-col AQC Der (%)         | 4                       | 4                      | 0.81038  | 0.02800 | 0.81038                      | 0.02800                  | 0.01400                  | 3.46%          | 0.03125               | 4.13%        |
| 132.99      | Phenylalanine, Miscellaneous (%)           | 2                       | 2                      | 0.70250  | 0.06010 |                              |                          |                          |                |                       |              |
| 133.00      | Proline, Post-col Ninhydrin Der (%)        | 18                      | 18                     | 1.3755   | 0.04626 | 1.3778                       | 0.04653                  | 0.01371                  | 3.38%          | 0.02709               | 3.81%        |
| 133.05      | Proline, Pre-col AQC Der (%)               | 4                       | 4                      | 1.4398   | 0.04506 | 1.4398                       | 0.04506                  | 0.02253                  | 3.13%          | 0.03100               | 3.79%        |
| 133.99      | Proline, Miscellaneous (%)                 | 2                       | 2                      | 1.2755   | 0.04313 |                              |                          |                          |                |                       |              |
| 134.00      | Serine, Post-col Ninhydrin Der (%)         | 18                      | 17                     | 1.1652   | 0.03897 | 1.1657                       | 0.03056                  | 0.00926                  | 2.62%          | 0.01875               | 3.91%        |
| 134.02      | Serine, Post-col OPA Der (%)               | 1                       | 1                      | 1.1350   |         |                              |                          |                          |                |                       |              |



| Method Code | Analyte and Method                              | Total # Labs Submitting | # Labs in Robust Calcs | Raw Mean | Raw SD  | Assigned Value - Robust Mean | AAFCO PT ffp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Average Range (R-bar) | Horwitz %RSD |
|-------------|---|-------------------------|------------------------|----------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------------|--------------|
| 134.05      | Serine, Pre-col AQC Der (%)                     | 4                       | 4                      | 1.1955   | 0.05904 | 1.1955                       | 0.05904                  | 0.02952                  | 4.94%          | 0.02650               | 3.89%        |
| 134.99      | Serine, Miscellaneous (%)                       | 2                       | 2                      | 1.2878   | 0.05268 |                              |                          |                          |                |                       |              |
| 135.00      | Threonine, Post-col Ninhydrin Der (%)           | 18                      | 18                     | 1.5219   | 0.05794 | 1.5215                       | 0.03375                  | 0.00994                  | 2.22%          | 0.02526               | 3.75%        |
| 135.02      | Threonine, Post-col OPA Der (%)                 | 1                       | 1                      | 1.5230   |         |                              |                          |                          |                |                       |              |
| 135.05      | Threonine, Pre-col AQC Der (%)                  | 4                       | 4                      | 1.5281   | 0.06520 | 1.5281                       | 0.06520                  | 0.03260                  | 4.27%          | 0.03825               | 3.75%        |
| 135.99      | Threonine, Miscellaneous (%)                    | 2                       | 2                      | 1.5163   | 0.01591 |                              |                          |                          |                |                       |              |
| 136.00      | Tryptophan, Alka-Hydrol Post-col Ninhyd (%)     | 5                       | 5                      | 0.38308  | 0.04229 | 0.38308                      | 0.04229                  | 0.01891                  | 11.04%         | 0.00808               | 4.62%        |
| 136.01      | Tryptophan, Alka-Hydrol Rev Phase LC UV (%)     | 2                       | 2                      | 0.40250  | 0.03465 |                              |                          |                          |                |                       |              |
| 136.02      | Tryptophan, Alka-Hydrol Post-col OPA De (%)     | 1                       | 1                      | 0.39250  |         |                              |                          |                          |                |                       |              |
| 136.03      | Tryptophan, Alka-Hydrol + IS RP LC FI (%)       | 5                       | 5                      | 0.40140  | 0.01033 | 0.40140                      | 0.01033                  | 0.00462                  | 2.57%          | 0.00200               | 4.59%        |
| 137.00      | Tyrosine, Post-col Ninhydrin Der (%)            | 12                      | 11                     | 0.59487  | 0.09312 | 0.60930                      | 0.06498                  | 0.02449                  | 10.67%         | 0.01506               | 4.31%        |
| 137.02      | Tyrosine, Post-col OPA Der (%)                  | 1                       | 1                      | 0.64200  |         |                              |                          |                          |                |                       |              |
| 137.05      | Tyrosine, Pre-col AQC Der (%)                   | 4                       | 4                      | 0.69288  | 0.06884 | 0.69288                      | 0.06884                  | 0.03442                  | 9.94%          | 0.02525               | 4.23%        |
| 137.99      | Tyrosine, Miscellaneous (%)                     | 2                       | 2                      | 0.57950  | 0.07000 |                              |                          |                          |                |                       |              |
| 138.00      | Valine, Post-col Ninhydrin Der (%)              | 18                      | 18                     | 1.3166   | 0.04701 | 1.3181                       | 0.04223                  | 0.01244                  | 3.20%          | 0.02381               | 3.84%        |
| 138.02      | Valine, Post-col OPA Der (%)                    | 1                       | 1                      | 1.3380   |         |                              |                          |                          |                |                       |              |
| 138.05      | Valine, Pre-col AQC Der (%)                     | 4                       | 4                      | 1.3373   | 0.11182 | 1.3373                       | 0.11182                  | 0.05591                  | 8.36%          | 0.03250               | 3.83%        |
| 138.99      | Valine, Miscellaneous (%)                       | 2                       | 2                      | 1.2370   | 0.02404 |                              |                          |                          |                |                       |              |
| 139.00      | Taurine, Post-col Ninhydrin Der (%)             | 1                       | 1                      | 0.15000  |         |                              |                          |                          |                |                       |              |
| 139.02      | Taurine, Post-col OPA Der (%)                   | 1                       | 1                      | 0.04800  |         |                              |                          |                          |                |                       |              |
| 139.05      | Taurine, Pre-col AQC Der (%)                    | 1                       | 1                      | 0.03800  |         |                              |                          |                          |                |                       |              |
| 139.99      | Taurine, Miscellaneous (%)                      | 2                       | 2                      | 0.04100  | 0.02475 |                              |                          |                          |                |                       |              |
| 160.99      | Fructose, Miscellaneous (%)                     | 3                       |                        |          |         |                              |                          |                          |                |                       |              |
| 161.99      | Galactose, Miscellaneous (%)                    | 1                       |                        | 0.00000  |         |                              |                          |                          |                |                       |              |
| 162.99      | Glucose, Miscellaneous (%)                      | 5                       | 3                      | 0.37500  | 0.09500 | 0.37500                      | 0.09500                  | 0.05485                  | 25.33%         | 0.07000               | 4.64%        |
| 163.99      | Lactose, Miscellaneous (%)                      | 10                      | 9                      | 30.151   | 2.4941  | 30.372                       | 2.2856                   | 0.95234                  | 7.53%          | 0.25867               | 1.81%        |
| 164.99      | Maltose, Miscellaneous (%)                      | 2                       |                        | 0.00000  |         |                              |                          |                          |                |                       |              |
| 165.99      | Sucrose, Miscellaneous (%)                      | 5                       | 2                      | 0.25500  | 0.06364 | 0.25500                      | 0.06364                  |                          |                | 0.01000               | 4.91%        |
| 166.99      | Raffinose, Miscellaneous (%)                    | 1                       |                        | 0.00000  |         |                              |                          |                          |                |                       |              |
| 167.99      | Stachyose, Miscellaneous (%)                    | 1                       |                        | 0.00000  |         |                              |                          |                          |                |                       |              |
| 351.00      | Chlortetracycline, Plate (mg/kg (ppm))          | 6                       | 6                      | 107.16   | 13.099  | 107.16                       | 14.854                   | 7.5802                   | 13.86%         | 5.0009                | 7.92%        |
| 351.03      | Chlortetracycline, LC (UV or FL) (mg/kg (ppm))  | 10                      | 10                     | 92.685   | 32.533  | 92.685                       | 36.893                   | 14.583                   | 39.80%         | 3.4907                | 8.09%        |
| 351.04      | Chlortetracycline, LC-MS (mg/kg (ppm))          | 1                       | 1                      | 168.00   |         |                              |                          |                          |                |                       |              |
| 351.05      | Chlortetracycline, LC-MS/MS (mg/kg (ppm))       | 5                       | 5                      | 107.74   | 28.455  | 107.74                       | 28.455                   | 12.725                   | 26.41%         | 8.4240                | 7.91%        |
| 354.01      | Decoquinatate, LC (UV or FL) (mg/kg (ppm))      | 5                       | 5                      | 133.11   | 13.667  | 133.11                       | 13.667                   | 6.1121                   | 10.27%         | 6.5000                | 7.66%        |
| 354.02      | Decoquinatate, LC (mg/kg (ppm))                 | 8                       | 8                      | 136.30   | 12.772  | 138.71                       | 8.0335                   | 3.5503                   | 5.79%          | 2.0964                | 7.61%        |
| 361.00      | Lasalocid sodium, Microbiological (mg/kg (ppm)) | 1                       | 1                      | 40.200   |         |                              |                          |                          |                |                       |              |
| 361.02      | Lasalocid sodium, LC (mg/kg (ppm))              | 8                       | 8                      | 61.164   | 6.7333  | 61.164                       | 7.6355                   | 3.3745                   | 12.48%         | 3.3021                | 8.61%        |

**Test Material Code # 201723**

**Issue Date : 04/30/2017**

| Method Code | Analyte and Method   | Total # Labs Submitting | # Labs in Robust Calcs | Raw Mean | Raw SD  | Assigned Value - Robust Mean | AAFCO PT ffp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Average Range (R-bar) | Horwitz %RSD |
|-------------|--|-------------------------|------------------------|----------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------------|--------------|
| 361.03      | Lasalocid sodium, LC (UV or FL) (mg/kg (ppm))  | 7                       | 7                      | 59.460   | 9.2353  | 59.448                       | 10.446                   | 4.9352                   | 17.57%         | 3.0470                | 8.65%        |
| 361.04      | Lasalocid sodium, LC-MS (mg/kg (ppm))  | 1                       | 1                      | 52.200   |         |                              |                          |                          |                |                       |              |
| 361.05      | Lasalocid sodium, LC-MS/MS (mg/kg (ppm))   | 1                       | 1                      | 73.500   |         |                              |                          |                          |                |                       |              |
| 400.01      | Water activity, Aqualab chilled mirror (Units)   | 5                       | 5                      | 0.25706  | 0.02497 | 0.25706                      | 0.02497                  | 0.01117                  | 9.71%          | 0.01120               |              |
| 400.99      | Water activity, Miscellaneous (Units)  | 1                       | 1                      | 0.26800  |         |                              |                          |                          |                |                       |              |
| 516.53      | Arsenic, total, ICP-MS, Microwave (mg / kg (ppm))                                      | 3                       | 3                      | 0.04090  | 0.01700 | 0.04090                      | 0.01700                  | 0.00981                  | 41.56%         | 0.00513               | 22.00%       |
| 518.43      | Cadmium, ICP, Microwave (mg / kg (ppm))  | 1                       |                        | 0.00000  |         |                              |                          |                          |                |                       |              |
| 518.53      | Cadmium, ICP-MS, Microwave (mg / kg (ppm))   | 3                       | 3                      | 0.01315  | 0.00152 | 0.01315                      | 0.00152                  | 0.00088                  | 11.56%         | 0.00170               | 22.00%       |
| 520.42      | Chromium, ICP, Open vessel (mg / kg (ppm))   | 3                       | 3                      | 9.5733   | 1.4611  | 9.5733                       | 1.4611                   | 0.84357                  | 15.26%         | 0.46667               | 11.39%       |
| 520.43      | Chromium, ICP, Microwave (mg / kg (ppm))   | 1                       | 1                      | 3.4950   |         |                              |                          |                          |                |                       |              |
| 520.52      | Chromium, ICP-MS, Open vessel (mg / kg (ppm))  | 1                       | 1                      | 0.56450  |         |                              |                          |                          |                |                       |              |
| 520.53      | Chromium, ICP-MS, Microwave (mg / kg (ppm))  | 1                       | 1                      | 4.2713   |         |                              |                          |                          |                |                       |              |
| 526.52      | Lead, ICP-MS, Open vessel (mg / kg (ppm))  | 1                       | 1                      | 0.11000  |         |                              |                          |                          |                |                       |              |
| 526.53      | Lead, ICP-MS, Microwave (mg / kg (ppm))  | 3                       | 3                      | 0.10725  | 0.01114 | 0.10725                      | 0.01114                  | 0.00643                  | 10.39%         | 0.00617               | 22.00%       |
| 529.99      | Mercury, Miscellaneous (µg / kg (ppb))   | 1                       | 1                      | 5.1950   |         |                              |                          |                          |                |                       |              |
| 539.42      | Nickel, ICP, Open vessel (mg / kg (ppm))   | 1                       | 1                      | 2.9150   |         |                              |                          |                          |                |                       |              |
| 539.52      | Nickel, ICP-MS, Open vessel (mg / kg (ppm))  | 1                       | 1                      | 2.2200   |         |                              |                          |                          |                |                       |              |
| 539.53      | Nickel, ICP-MS, Microwave (mg / kg (ppm))  | 1                       | 1                      | 2.2036   |         |                              |                          |                          |                |                       |              |
| 710.99      | Lauric Acid (12:0), Miscellaneous (% (w/w))  | 1                       | 1                      | 0.91250  |         |                              |                          |                          |                |                       |              |
| 718.99      | Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))                                    | 1                       | 1                      | 0.36750  |         |                              |                          |                          |                |                       |              |
| 726.99      | Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))                                   | 1                       | 1                      | 3.8650   |         |                              |                          |                          |                |                       |              |
| 728.99      | alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))                        | 1                       | 1                      | 0.23150  |         |                              |                          |                          |                |                       |              |
| 736.99      | Arachidonic Acid (5c,8c,11c,14c-20:4), Miscellaneous (% (w/w))                         | 1                       | 1                      | 0.07900  |         |                              |                          |                          |                |                       |              |
| 740.99      | Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))            | 1                       | 1                      | 0.18700  |         |                              |                          |                          |                |                       |              |
| 746.99      | Docosapentaenoic Acid n-3 DPA (DHA) (7c,10c,13c,16c,19c-22:5), Miscellaneous (% (w/w)) | 1                       | 1                      | 0.01700  |         |                              |                          |                          |                |                       |              |
| 750.99      | Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c,22:6), Miscellaneous (% (w/w))         | 1                       | 1                      | 0.00000  |         |                              |                          |                          |                |                       |              |
| 754.99      | Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))               | 1                       | 1                      | 0.45500  |         |                              |                          |                          |                |                       |              |
| 756.99      | Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))               | 1                       | 1                      | 4.1350   |         |                              |                          |                          |                |                       |              |

Notes: Robust statistics not used if < 6 labs reporting, in this case means and SD's may be reported based on Raw Data with obvious blunders removed.



**AAFCO**  
Proficiency Testing Program



**Animal Feed Scheme**  
**Milk Replacer, Medicated**  
**Test Material Code # 201723**

**Method Precision Report**

**# Methods Reported: 87**  
**# Labs Reporting: 198**  
**Issue Date : 04/30/2017**

| Method Code | Analyte and Method                        | Total # Labs Submitting | # Labs used in Precision Calcs | Precision Mean | Precision SD | Between Labs SL | Within Labs sr | Reproducibility SR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  |
|-------------|---|-------------------------|--------------------------------|----------------|--------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|
| 001.00      | Loss on Drying, Vac 95°C 5 hr (%)         | 11                      | 10                             | 3.8805         | 0.91720      | 0.32525         | 0.07761        | 0.33438            | 8.98%             | 2.144%           | 9.24%                | 4.3082 |
| 001.07      | Loss on Drying, 104°C 3 hr, in malt (%)   | 46                      | 42                             | 4.0218         | 0.90870      | 0.31085         | 0.07558        | 0.31991            | 8.11%             | 1.971%           | 8.34%                | 4.2326 |
| 001.99      | Loss on Drying, Miscellaneous (%)         | 20                      | 17                             | 3.8138         | 0.62428      | 0.34799         | 0.11163        | 0.36546            | 9.15%             | 2.935%           | 9.61%                | 3.2738 |
| 002.01      | Protein, Auto Kjel-Foss (%)               | 13                      | 12                             | 22.586         | 0.35712      | 0.34426         | 0.11918        | 0.36431            | 1.52%             | 0.527%           | 1.61%                | 3.0567 |
| 002.05      | Protein, Copper, Boric Acid (%)           | 36                      | 31                             | 22.818         | 0.44767      | 0.30171         | 0.08005        | 0.31215            | 1.32%             | 0.351%           | 1.37%                | 3.8995 |
| 002.06      | Protein, Combustion Nitrogen Analyzer (%) | 123                     | 116                            | 23.144         | 0.82398      | 0.34837         | 0.19576        | 0.39961            | 1.50%             | 0.843%           | 1.72%                | 2.0413 |
| 003.06      | Fat, Pet Ether (%)                        | 12                      | 10                             | 6.7794         | 5.0515       | 0.73627         | 0.16992        | 0.75563            | 13.97%            | 3.224%           | 14.33%               | 4.4468 |
| 003.10      | Fat, Soxtec, Pet Ether (%)                | 17                      | 16                             | 7.3753         | 7.8234       | 6.4611          | 0.20819        | 6.4644             | 103.60%           | 3.338%           | 103.65%              | 31.050 |
| 003.14      | Fat, Ankom (%)                            | 32                      | 31                             | 12.337         | 4.5115       | 4.0902          | 0.27227        | 4.0993             | 34.15%            | 2.273%           | 34.22%               | 15.056 |
| 004.00      | Fiber, Crude, Asbestos Free (%)           | 15                      | 12                             | 0.91763        | 0.26695      | 0.11949         | 0.04903        | 0.12916            | 14.49%            | 5.945%           | 15.66%               | 2.6342 |
| 004.06      | Fiber, Fibertec (%)                       | 21                      | 17                             | 1.1351         | 1.1148       | 0.23443         | 0.05995        | 0.24198            | 30.65%            | 7.838%           | 31.64%               | 4.0362 |
| 004.07      | Fiber, ANKOM (%)                          | 45                      | 40                             | 1.0353         | 0.37864      | 0.35008         | 0.08255        | 0.35968            | 35.03%            | 8.261%           | 36.00%               | 4.3572 |
| 005.00      | Ash, 2h @ 600°C (%)                       | 96                      | 89                             | 10.093         | 0.18219      | 0.14466         | 0.06276        | 0.15768            | 1.43%             | 0.622%           | 1.56%                | 2.5125 |
| 005.05      | Ash, 3h @ 550°C (%)                       | 35                      | 33                             | 10.269         | 0.12462      | 0.11852         | 0.03993        | 0.12507            | 1.15%             | 0.389%           | 1.22%                | 3.1320 |
| 005.99      | Ash, Miscellaneous (%)                    | 9                       | 9                              | 10.299         | 0.16436      | 0.16004         | 0.05297        | 0.16858            | 1.55%             | 0.514%           | 1.64%                | 3.1826 |
| 008.02      | Fiber, Acid Detergent (%)                 | 10                      | 9                              | 1.7504         | 1.6946       | 0.52052         | 0.12934        | 0.53635            | 42.04%            | 10.446%          | 43.32%               | 4.1468 |
| 008.08      | Fiber, Acid Detergent, ANKOM (%)          | 24                      | 22                             | 1.0640         | 0.45488      | 0.35409         | 0.12571        | 0.37575            | 35.82%            | 12.718%          | 38.01%               | 2.9889 |
| 009.09      | Fiber, Neutral Detergent, ANKOM (%)       | 23                      | 20                             | 1.4563         | 0.44686      | 0.35449         | 0.11356        | 0.37224            | 25.15%            | 8.058%           | 26.41%               | 3.2779 |
| 010.99      | Moisture, Miscellaneous (%)               | 16                      | 15                             | 4.4984         | 1.7263       | 0.75829         | 0.13652        | 0.77048            | 18.46%            | 3.323%           | 18.75%               | 5.6439 |
| 011.01      | Loss on Drying, 135°C 2hr (%)             | 55                      | 52                             | 8.2736         | 2.2930       | 2.2056          | 0.14441        | 2.2103             | 27.10%            | 1.774%           | 27.15%               | 15.305 |
| 013.00      | Fat, Acid hydrolysis (%)                  | 22                      | 19                             | 22.390         | 4.1472       | 1.7770          | 0.14434        | 1.7829             | 7.64%             | 0.620%           | 7.66%                | 12.352 |
| 013.02      | Fat, Mojonnier, Bak Ext (%)               | 19                      | 16                             | 23.779         | 1.4806       | 0.56002         | 0.20461        | 0.59623            | 2.35%             | 0.859%           | 2.50%                | 2.9139 |
| 013.03      | Fat, Roesse-Gottlieb (%)                  | 9                       | 9                              | 23.281         | 0.87236      | 0.82728         | 0.39145        | 0.91522            | 3.55%             | 1.681%           | 3.93%                | 2.3380 |
| 013.13      | Fat, Ankom- Acid Hydrolysis (%)           | 10                      | 9                              | 22.884         | 0.40769      | 0.36440         | 0.25858        | 0.44682            | 1.59%             | 1.130%           | 1.95%                | 1.7280 |
| 019.00      | Calcium, Ox-Mn04 Vol. (%)                 | 15                      | 14                             | 1.6988         | 0.07272      | 0.06011         | 0.01968        | 0.06325            | 3.52%             | 1.151%           | 3.70%                | 3.2143 |
| 019.31      | Calcium, AAS, Dry ash (%)                 | 30                      | 26                             | 1.6978         | 0.10466      | 0.06377         | 0.02521        | 0.06857            | 3.80%             | 1.501%           | 4.08%                | 2.7202 |
| 019.41      | Calcium, ICP, Dry ash (%)                 | 24                      | 23                             | 1.7089         | 0.10651      | 0.08950         | 0.03661        | 0.09670            | 5.20%             | 2.128%           | 5.62%                | 2.6413 |
| 019.42      | Calcium, ICP, Open vessel (%)             | 23                      | 20                             | 1.7349         | 0.16796      | 0.09559         | 0.03618        | 0.10220            | 5.43%             | 2.054%           | 5.80%                | 2.8247 |
| 019.43      | Calcium, ICP, Microwave (%)               | 29                      | 26                             | 1.6722         | 0.10570      | 0.09089         | 0.02445        | 0.09412            | 5.40%             | 1.452%           | 5.59%                | 3.8503 |
| 022.31      | Copper, AAS, Dry ash (mg / kg (ppm))      | 11                      | 10                             | 12.285         | 4.2846       | 4.2785          | 0.89514        | 4.3711             | 35.91%            | 7.514%           | 36.69%               | 4.8832 |
| 022.41      | Copper, ICP, Dry ash (mg / kg (ppm))      | 17                      | 15                             | 9.8846         | 3.6050       | 2.2064          | 1.1026         | 2.4665             | 24.00%            | 11.994%          | 26.83%               | 2.2370 |
| 022.42      | Copper, ICP, Open vessel (mg / kg (ppm))  | 16                      | 15                             | 7.4598         | 3.4200       | 3.2726          | 1.4047         | 3.5613             | 43.87%            | 18.830%          | 47.74%               | 2.5354 |

| Method Code | Analyte and Method                          | Total # Labs Submitting | # Labs used in Precision Calcs | Precision Mean | Precision SD | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  |
|-------------|---|-------------------------|--------------------------------|----------------|--------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|
| 022.43      | Copper, ICP, Microwave (mg / kg (ppm))      | 20                      | 18                             | 9.9592         | 7.3687       | 3.0779          | 1.3182         | 3.3483             | 39.56%            | 16.942%          | 43.03%               | 2.5401 |
| 025.31      | Iron, AAS, Dry ash (mg / kg (ppm))          | 14                      | 14                             | 193.14         | 33.237       | 31.257          | 15.980         | 35.105             | 16.18%            | 8.273%           | 18.18%               | 2.1969 |
| 025.41      | Iron, ICP, Dry ash (mg / kg (ppm))          | 20                      | 17                             | 170.00         | 48.566       | 28.199          | 8.5742         | 29.474             | 15.75%            | 4.788%           | 16.46%               | 3.4375 |
| 025.42      | Iron, ICP, Open vessel (mg / kg (ppm))      | 16                      | 16                             | 176.54         | 57.633       | 54.835          | 25.089         | 60.302             | 31.06%            | 14.212%          | 34.16%               | 2.4035 |
| 025.43      | Iron, ICP, Microwave (mg / kg (ppm))        | 21                      | 19                             | 162.05         | 36.434       | 36.587          | 11.488         | 38.348             | 22.90%            | 7.190%           | 24.00%               | 3.3381 |
| 027.31      | Magnesium, AAS, Dry ash (%)                 | 19                      | 17                             | 0.12306        | 0.00532      | 0.00547         | 0.00167        | 0.00572            | 4.46%             | 1.359%           | 4.66%                | 3.4290 |
| 027.41      | Magnesium, ICP, Dry ash (%)                 | 19                      | 18                             | 0.12419        | 0.04789      | 0.02605         | 0.00369        | 0.02631            | 22.67%            | 3.211%           | 22.90%               | 7.1311 |
| 027.42      | Magnesium, ICP, Open vessel (%)             | 20                      | 18                             | 0.12609        | 0.01231      | 0.01156         | 0.00463        | 0.01245            | 9.10%             | 3.647%           | 9.81%                | 2.6888 |
| 027.43      | Magnesium, ICP, Microwave (%)               | 25                      | 23                             | 0.12264        | 0.01457      | 0.01211         | 0.00462        | 0.01296            | 10.01%            | 3.813%           | 10.71%               | 2.8084 |
| 028.31      | Manganese, AAS, Dry ash (mg / kg (ppm))     | 12                      | 12                             | 46.554         | 4.7861       | 4.4129          | 2.6203         | 5.1322             | 9.48%             | 5.628%           | 11.02%               | 1.9587 |
| 028.41      | Manganese, ICP, Dry ash (mg / kg (ppm))     | 18                      | 15                             | 42.716         | 11.495       | 4.7389          | 2.0520         | 5.1642             | 10.61%            | 4.593%           | 11.56%               | 2.5166 |
| 028.42      | Manganese, ICP, Open vessel (mg / kg (ppm)) | 19                      | 18                             | 47.570         | 6.7980       | 4.0866          | 4.1926         | 5.8548             | 8.79%             | 9.018%           | 12.59%               | 1.3964 |
| 028.43      | Manganese, ICP, Microwave (mg / kg (ppm))   | 21                      | 19                             | 48.816         | 6.5091       | 2.9260          | 3.8806         | 4.8601             | 6.00%             | 7.964%           | 9.97%                | 1.2524 |
| 031.01      | Phosphorus, Photometric (%)                 | 47                      | 41                             | 0.76923        | 0.05494      | 0.03417         | 0.00816        | 0.03513            | 4.51%             | 1.076%           | 4.63%                | 4.3074 |
| 031.41      | Phosphorus, ICP, Dry ash (%)                | 23                      | 20                             | 0.76851        | 0.05829      | 0.06062         | 0.00837        | 0.06120            | 7.87%             | 1.087%           | 7.95%                | 7.3100 |
| 031.42      | Phosphorus, ICP, Open vessel (%)            | 23                      | 22                             | 0.76507        | 0.05880      | 0.04863         | 0.01647        | 0.05135            | 6.30%             | 2.134%           | 6.65%                | 3.1169 |
| 031.43      | Phosphorus, ICP, Microwave (%)              | 27                      | 24                             | 0.77340        | 0.04203      | 0.03159         | 0.01055        | 0.03330            | 4.05%             | 1.354%           | 4.27%                | 3.1578 |
| 032.31      | Potassium, AAS, Dry ash (%)                 | 21                      | 18                             | 2.1223         | 0.40292      | 0.19630         | 0.04031        | 0.20040            | 9.66%             | 1.983%           | 9.86%                | 4.9716 |
| 032.41      | Potassium, ICP, Dry ash (%)                 | 20                      | 17                             | 1.9082         | 0.44625      | 0.20554         | 0.03776        | 0.20898            | 10.32%            | 1.896%           | 10.49%               | 5.5341 |
| 032.42      | Potassium, ICP, Open vessel (%)             | 20                      | 19                             | 2.0960         | 0.11957      | 0.09205         | 0.04931        | 0.10442            | 4.43%             | 2.371%           | 5.02%                | 2.1178 |
| 032.43      | Potassium, ICP, Microwave (%)               | 25                      | 23                             | 2.0114         | 0.10678      | 0.10520         | 0.03497        | 0.11086            | 5.22%             | 1.736%           | 5.50%                | 3.1701 |
| 033.00      | Salt as chloride, Sol Cl (%)                | 19                      | 17                             | 1.8120         | 0.12741      | 0.08865         | 0.01635        | 0.09014            | 4.95%             | 0.914%           | 5.04%                | 5.5124 |
| 033.01      | Salt as chloride, Poten Cl (%)              | 24                      | 22                             | 1.8185         | 0.05475      | 0.03194         | 0.02425        | 0.04010            | 1.76%             | 1.340%           | 2.22%                | 1.6538 |
| 035.31      | Sodium, AAS, Dry ash (%)                    | 21                      | 20                             | 0.69008        | 0.09399      | 0.06560         | 0.01944        | 0.06842            | 9.71%             | 2.878%           | 10.13%               | 3.5198 |
| 035.41      | Sodium, ICP, Dry ash (%)                    | 20                      | 17                             | 0.64447        | 0.06306      | 0.03251         | 0.01288        | 0.03497            | 4.95%             | 1.963%           | 5.33%                | 2.7147 |
| 035.42      | Sodium, ICP, Open vessel (%)                | 19                      | 18                             | 0.66805        | 0.04675      | 0.04639         | 0.00818        | 0.04710            | 6.94%             | 1.225%           | 7.05%                | 5.7559 |
| 035.43      | Sodium, ICP, Microwave (%)                  | 26                      | 24                             | 0.64855        | 0.05465      | 0.04183         | 0.00843        | 0.04267            | 6.52%             | 1.314%           | 6.65%                | 5.0624 |
| 036.42      | Sulfur, ICP, Open vessel (%)                | 18                      | 17                             | 0.36657        | 0.02662      | 0.02713         | 0.00577        | 0.02774            | 7.40%             | 1.574%           | 7.57%                | 4.8073 |
| 036.43      | Sulfur, ICP, Microwave (%)                  | 15                      | 14                             | 0.36682        | 0.02661      | 0.02445         | 0.01483        | 0.02860            | 6.67%             | 4.043%           | 7.80%                | 1.9285 |
| 037.31      | Zinc, AAS, Dry ash (mg / kg (ppm))          | 12                      | 10                             | 82.262         | 11.971       | 6.9473          | 3.3944         | 7.7322             | 8.76%             | 4.279%           | 9.75%                | 2.2779 |
| 037.41      | Zinc, ICP, Dry ash (mg / kg (ppm))          | 17                      | 14                             | 78.721         | 22.394       | 11.415          | 6.5729         | 13.172             | 13.54%            | 7.795%           | 15.62%               | 2.0040 |
| 037.42      | Zinc, ICP, Open vessel (mg / kg (ppm))      | 19                      | 18                             | 78.407         | 13.585       | 12.624          | 6.5303         | 14.213             | 15.93%            | 8.239%           | 17.93%               | 2.1764 |
| 037.43      | Zinc, ICP, Microwave (mg / kg (ppm))        | 23                      | 21                             | 86.071         | 18.217       | 10.243          | 3.8316         | 10.936             | 12.51%            | 4.680%           | 13.36%               | 2.8543 |
| 106.02      | Vitamin A, LC (KU / kg)                     | 21                      | 20                             | 40.666         | 9.0371       | 8.8078          | 2.8605         | 9.2607             | 21.66%            | 7.034%           | 22.77%               | 3.2375 |
| 109.02      | Vitamin E, LC (IU/kg)                       | 19                      | 17                             | 232.83         | 93.516       | 74.801          | 15.255         | 76.340             | 30.34%            | 6.188%           | 30.97%               | 5.0042 |
| 120.00      | Alanine, Post-col Ninhydrin Der (%)         | 18                      | 17                             | 1.1125         | 0.03102      | 0.02539         | 0.01547        | 0.02973            | 2.27%             | 1.386%           | 2.66%                | 1.9220 |
| 121.00      | Arginine, Post-col Ninhydrin Der (%)        | 18                      | 17                             | 0.59621        | 0.02028      | 0.01921         | 0.00919        | 0.02129            | 3.22%             | 1.542%           | 3.57%                | 2.3162 |
| 122.00      | Aspartic, Post-col Ninhydrin Der (%)        | 18                      | 17                             | 2.4310         | 0.06263      | 0.04622         | 0.03130        | 0.05582            | 1.91%             | 1.292%           | 2.30%                | 1.7834 |
| 124.00      | Cysteine/Cystine, PAO Post-col Ninhydri (%) | 18                      | 16                             | 0.51484        | 0.03228      | 0.02597         | 0.01051        | 0.02801            | 5.00%             | 2.025%           | 5.40%                | 2.6647 |
| 125.00      | Glutamic, Post-col Ninhydrin Der (%)        | 18                      | 18                             | 4.0247         | 0.11214      | 0.10517         | 0.05505        | 0.11871            | 2.61%             | 1.368%           | 2.95%                | 2.1565 |

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| Method Code | Analyte and Method                             | Total # Labs Submitting | # Labs used in Precision Calcs | Precision Mean | Precision SD | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  |
|-------------|--|-------------------------|--------------------------------|----------------|--------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|
| 126.00      | Glycine, Post-col Ninhydrin Der (%)            | 18                      | 17                             | 0.45916        | 0.01432      | 0.01091         | 0.00661        | 0.01275            | 2.37%             | 1.433%           | 2.77%                | 1.9295 |
| 127.00      | Histidine, Post-col Ninhydrin Der (%)          | 17                      | 16                             | 0.44360        | 0.02083      | 0.01400         | 0.01033        | 0.01740            | 3.18%             | 2.347%           | 3.95%                | 1.6843 |
| 128.00      | Isoleucine, Post-col Ninhydrin Der (%)         | 18                      | 16                             | 1.3689         | 0.03267      | 0.02382         | 0.02006        | 0.03115            | 1.74%             | 1.462%           | 2.27%                | 1.5525 |
| 129.00      | Leucine, Post-col Ninhydrin Der (%)            | 18                      | 17                             | 2.3483         | 0.04920      | 0.04857         | 0.02056        | 0.05274            | 2.07%             | 0.875%           | 2.25%                | 2.5653 |
| 130.00      | L-Lysine, Post-col Ninhydrin Der (%)           | 20                      | 18                             | 2.2101         | 0.13153      | 0.10873         | 0.04643        | 0.11823            | 4.96%             | 2.117%           | 5.39%                | 2.5464 |
| 131.00      | Methionine, PAO Post-col Ninhydrin Der (%)     | 18                      | 16                             | 0.47311        | 0.03329      | 0.02468         | 0.01561        | 0.02920            | 5.27%             | 3.334%           | 6.24%                | 1.8709 |
| 132.00      | Phenylalanine, Post-col Ninhydrin Der (%)      | 18                      | 15                             | 0.76941        | 0.02778      | 0.01765         | 0.00882        | 0.01973            | 2.32%             | 1.157%           | 2.59%                | 2.2376 |
| 133.00      | Proline, Post-col Ninhydrin Der (%)            | 18                      | 17                             | 1.3755         | 0.04626      | 0.03498         | 0.02206        | 0.04135            | 2.53%             | 1.597%           | 2.99%                | 1.8742 |
| 134.00      | Serine, Post-col Ninhydrin Der (%)             | 18                      | 16                             | 1.1652         | 0.03897      | 0.02878         | 0.01729        | 0.03357            | 2.46%             | 1.476%           | 2.87%                | 1.9419 |
| 135.00      | Threonine, Post-col Ninhydrin Der (%)          | 18                      | 17                             | 1.5219         | 0.05794      | 0.04384         | 0.02499        | 0.05046            | 2.86%             | 1.633%           | 3.30%                | 2.0193 |
| 137.00      | Tyrosine, Post-col Ninhydrin Der (%)           | 12                      | 10                             | 0.59487        | 0.09312      | 0.04922         | 0.01137        | 0.05052            | 7.95%             | 1.836%           | 8.16%                | 4.4437 |
| 138.00      | Valine, Post-col Ninhydrin Der (%)             | 18                      | 16                             | 1.3166         | 0.04701      | 0.03638         | 0.01942        | 0.04124            | 2.75%             | 1.469%           | 3.12%                | 2.1235 |
| 163.99      | Lactose, Miscellaneous (%)                     | 10                      | 9                              | 30.151         | 2.4941       | 2.4862          | 0.28128        | 2.5021             | 8.25%             | 0.933%           | 8.30%                | 8.8953 |
| 351.03      | Chlortetracycline, LC (UV or FL) (mg/kg (ppm)) | 10                      | 10                             | 92.685         | 32.533       | 32.461          | 3.0705         | 32.606             | 35.02%            | 3.313%           | 35.18%               | 10.619 |
| 361.02      | Lasalocid sodium, LC (mg/kg (ppm))             | 8                       | 8                              | 61.164         | 6.7333       | 6.2942          | 3.3822         | 7.1454             | 10.29%            | 5.530%           | 11.68%               | 2.1126 |

Notes: Precision Calculations provided for methods with 8 or more labs used in calculations.