

# AAFCO Check Sample Program

All Methods Report

Sort by Method

Proficiency For Individual Methods

Sample # 201329

Calf starter/grower, Medicated



# AAFCO

## Check Sample Program

Issue Date : 10/31/2013

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean   | SD      | Assigned Value - Robust Mean | AAFCO CS fip - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Between Labs sL | Within Labs sI | Reproducibility sR | Between Labs %RSD | Within Labs %/sI | Reproducibility %RSD | sR/sr  | Average Range (R-bar) | Horwitz %RSD |
|-------------|-------------------------|---------------------------------|--------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|-----------------------|--------------|
| 001.00      | 11                      | 6                               | 11.951 | 0.62480 | 12.003                       | 0.42598                  | 0.11385                  | 3.55%          | 0.62400         | 0.04463        | 0.62560            | 5.22%             | 0.37%            | 5.23%                | 14.018 | 0.09429               | 2.75%        |
| 001.03      | 13                      | 11                              | 11.886 | 0.15231 | 11.893                       | 0.14836                  | 0.03028                  | 1.25%          | 0.15187         | 0.01634        | 0.15275            | 1.28%             | 0.14%            | 1.29%                | 9.3455 | 0.02453               | 2.76%        |
| 001.05      | 1                       |                                 | 11.880 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 001.07      | 36                      | 33                              | 11.721 | 0.34970 | 11.736                       | 0.34259                  | 0.04154                  | 2.92%          | 0.33926         | 0.11994        | 0.35984            | 2.89%             | 1.02%            | 3.07%                | 3.0001 | 0.15883               | 2.76%        |
| 001.08      | 3                       | 2                               | 11.958 | 0.20153 | 11.955                       | 0.14257                  | 0.05820                  | 1.19%          | 0.20149         | 0.00500        | 0.20156            | 1.69%             | 0.04%            | 1.69%                | 40.311 | 0.07667               | 2.75%        |
| 001.99      | 18                      | 15                              | 11.826 | 0.50381 | 11.854                       | 0.43990                  | 0.07544                  | 3.71%          | 0.50178         | 0.06387        | 0.50583            | 4.24%             | 0.54%            | 4.28%                | 7.9195 | 0.08461               | 2.76%        |
| 002.00      | 3                       | 3                               | 18.747 | 0.40603 | 18.747                       | 0.40603                  | 0.16576                  | 2.17%          | 0.22835         | 0.47480        | 0.52685            | 1.22%             | 2.53%            | 2.81%                | 1.1096 | 0.49333               | 2.57%        |
| 002.01      | 15                      | 14                              | 18.170 | 0.16152 | 18.148                       | 0.19381                  | 0.03538                  | 1.07%          | 0.13031         | 0.13496        | 0.18761            | 0.72%             | 0.74%            | 1.03%                | 1.3901 | 0.14665               | 2.59%        |
| 002.02      | 6                       | 6                               | 18.127 | 0.46449 | 18.127                       | 0.52674                  | 0.15206                  | 2.91%          | 0.45309         | 0.14468        | 0.47563            | 2.50%             | 0.80%            | 2.62%                | 3.2873 | 0.17390               | 2.59%        |
| 002.04      | 5                       | 4                               | 18.011 | 0.58110 | 18.001                       | 0.50377                  | 0.15930                  | 2.80%          | 0.57950         | 0.06093        | 0.58269            | 3.22%             | 0.34%            | 3.24%                | 9.5632 | 0.18200               | 2.59%        |
| 002.05      | 42                      | 39                              | 18.090 | 0.21371 | 18.101                       | 0.21363                  | 0.02388                  | 1.18%          | 0.20623         | 0.07927        | 0.22094            | 1.14%             | 0.44%            | 1.22%                | 2.7874 | 0.08493               | 2.59%        |
| 002.06      | 226                     | 137                             | 18.366 | 0.29726 | 18.365                       | 0.26798                  | 0.01585                  | 1.46%          | 0.27749         | 0.15076        | 0.31579            | 1.51%             | 0.82%            | 1.72%                | 2.0947 | 0.17294               | 2.58%        |
| 002.07      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 002.08      | 3                       | 3                               | 18.145 | 0.25678 | 18.145                       | 0.25678                  | 0.10483                  | 1.42%          | 0.25403         | 0.05308        | 0.25951            | 1.40%             | 0.29%            | 1.43%                | 4.8889 | 0.07250               | 2.59%        |
| 002.10      | 3                       | 3                               | 17.560 | 0.55240 | 17.560                       | 0.55240                  | 0.22551                  | 3.15%          | 0.48496         | 0.37406        | 0.61245            | 2.76%             | 2.13%            | 3.49%                | 1.6373 | 0.39600               | 2.60%        |
| 002.11      | 5                       | 4                               | 17.956 | 0.46100 | 17.209                       | 1.7179                   | 0.54326                  | 9.98%          | 0.45945         | 0.05350        | 0.46255            | 2.56%             | 0.30%            | 2.58%                | 8.6455 | 0.05000               | 2.61%        |
| 002.99      | 4                       | 4                               | 18.105 | 0.41779 | 18.105                       | 0.41779                  | 0.14771                  | 2.31%          | 0.41556         | 0.06103        | 0.42001            | 2.30%             | 0.34%            | 2.32%                | 6.8818 | 0.08500               | 2.59%        |
| 003.00      | 16                      | 13                              | 3.6980 | 0.33792 | 3.7359                       | 0.31392                  | 0.05731                  | 8.40%          | 0.33749         | 0.02412        | 0.33835            | 9.13%             | 0.65%            | 9.15%                | 14.026 | 0.03493               | 3.28%        |
| 003.01      | 3                       | 2                               | 3.7320 | 0.10621 | 3.6763                       | 0.12219                  | 0.04988                  | 3.32%          | 0.10117         | 0.04571        | 0.11102            | 2.71%             | 1.22%            | 2.97%                | 2.4287 | 0.44467               | 3.29%        |
| 003.06      | 19                      | 16                              | 3.4489 | 0.12039 | 3.4212                       | 0.15715                  | 0.02619                  | 4.59%          | 0.09809         | 0.09872        | 0.13917            | 2.84%             | 2.86%            | 4.04%                | 1.4097 | 0.13826               | 3.32%        |
| 003.07      | 1                       |                                 | 2.7150 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 003.09      | 22                      | 18                              | 3.5288 | 0.20318 | 3.5166                       | 0.20320                  | 0.03213                  | 5.78%          | 0.19829         | 0.06269        | 0.20796            | 5.62%             | 1.78%            | 5.89%                | 3.3172 | 0.09752               | 3.31%        |
| 003.10      | 37                      | 33                              | 3.3108 | 0.19830 | 3.2974                       | 0.14011                  | 0.01675                  | 4.25%          | 0.19345         | 0.06167        | 0.20304            | 5.84%             | 1.86%            | 6.13%                | 3.2925 | 0.07072               | 3.34%        |
| 003.11      | 4                       | 4                               | 3.6725 | 0.19238 | 3.6725                       | 0.19238                  | 0.06802                  | 5.24%          | 0.19195         | 0.01803        | 0.19280            | 5.23%             | 0.49%            | 5.25%                | 10.694 | 0.02000               | 3.29%        |
| 003.12      | 15                      | 14                              | 3.4509 | 0.16276 | 3.4509                       | 0.18457                  | 0.03488                  | 5.35%          | 0.16137         | 0.03008        | 0.16415            | 4.68%             | 0.87%            | 4.76%                | 5.4564 | 0.03235               | 3.32%        |
| 003.13      | 9                       | 9                               | 3.3619 | 0.51629 | 3.3175                       | 0.09090                  | 0.02143                  | 2.74%          | 0.51389         | 0.07033        | 0.51868            | 15.29%            | 2.09%            | 15.43%               | 7.3755 | 0.08900               | 3.34%        |
| 003.14      | 34                      | 31                              | 3.3665 | 0.28158 | 3.3622                       | 0.27451                  | 0.03329                  | 8.16%          | 0.27473         | 0.08730        | 0.28827            | 8.16%             | 2.59%            | 8.56%                | 3.3021 | 0.11179               | 3.33%        |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean   | SD      | Assigned Value - Robust Mean | AAFCO CS ftp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  | Average Range (R-bar) | Horwitz %RSD |
|-------------|-------------------------|---------------------------------|--------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|-----------------------|--------------|
| 003.99      | 9                       | 5                               | 3.7280 | 0.95434 | 3.7280                       | 0.95434                  | 0.30179                  | 25.60%         | 0.95202         | 0.09391        | 0.95664            | 25.54%            | 2.52%            | 25.66%               | 10.186 | 0.10000               | 3.28%        |
| 004.00      | 20                      | 18                              | 5.7211 | 0.43467 | 5.7678                       | 0.43449                  | 0.07048                  | 7.53%          | 0.42643         | 0.11911        | 0.44275            | 7.45%             | 2.08%            | 7.74%                | 3.7172 | 0.14711               | 3.07%        |
| 004.01      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 004.03      | 5                       | 5                               | 5.9400 | 0.74381 | 5.9400                       | 0.74381                  | 0.23521                  | 12.52%         | 0.73256         | 0.18221        | 0.75488            | 12.33%            | 3.07%            | 12.71%               | 4.1430 | 0.17200               | 3.06%        |
| 004.06      | 42                      | 39                              | 5.7326 | 0.38372 | 5.7197                       | 0.34325                  | 0.03791                  | 6.00%          | 0.38008         | 0.07463        | 0.38734            | 6.63%             | 1.30%            | 6.76%                | 5.1904 | 0.08599               | 3.08%        |
| 004.07      | 53                      | 48                              | 5.3531 | 0.44496 | 5.4018                       | 0.42266                  | 0.04144                  | 7.82%          | 0.43930         | 0.10012        | 0.45056            | 8.21%             | 1.87%            | 8.42%                | 4.5000 | 0.11894               | 3.10%        |
| 004.11      | 5                       | 5                               | 4.9160 | 1.1234  | 4.9160                       | 1.1234                   | 0.35526                  | 22.85%         | 1.1211          | 0.10315        | 1.1258             | 22.80%            | 2.10%            | 22.90%               | 10.914 | 0.11200               | 3.15%        |
| 004.99      | 3                       | 2                               | 5.0950 | 0.00707 | 5.3817                       | 0.49655                  | 0.20271                  | 9.23%          |                 | 0.05000        |                    |                   | 0.98%            |                      |        | 0.09000               | 3.10%        |
| 005.00      | 192                     | 108                             | 7.6703 | 0.20996 | 7.6727                       | 0.22315                  | 0.01484                  | 2.91%          | 0.20676         | 0.05165        | 0.21312            | 2.70%             | 0.67%            | 2.78%                | 4.1264 | 0.06457               | 2.94%        |
| 005.02      | 1                       |                                 | 8.0450 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 005.03      | 3                       | 0                               |        |         | 7.4200                       | 0.16971                  | 0.08485                  | 2.29%          |                 |                |                    |                   |                  |                      |        | 0.02000               | 2.96%        |
| 005.05      | 29                      | 25                              | 7.8994 | 0.12384 | 7.8975                       | 0.13459                  | 0.01799                  | 1.70%          | 0.12106         | 0.03696        | 0.12657            | 1.53%             | 0.47%            | 1.60%                | 3.4245 | 0.04869               | 2.93%        |
| 005.11      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 005.99      | 16                      | 15                              | 7.8345 | 0.24121 | 7.8259                       | 0.25443                  | 0.04498                  | 3.25%          | 0.23771         | 0.05787        | 0.24465            | 3.03%             | 0.74%            | 3.12%                | 4.2277 | 0.05738               | 2.93%        |
| 006.00      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 006.01      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 006.03      | 1                       |                                 | 4.7250 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 006.99      | 7                       | 6                               | 4.1333 | 1.4543  | 4.1333                       | 1.6492                   | 0.47608                  | 39.90%         | 1.4540          | 0.04453        | 1.4547             | 35.18%            | 1.08%            | 35.19%               | 32.664 | 0.04667               | 3.23%        |
| 008.02      | 18                      | 16                              | 7.9684 | 0.49885 | 7.9973                       | 0.46486                  | 0.07972                  | 5.81%          | 0.47214         | 0.22773        | 0.52419            | 5.93%             | 2.86%            | 6.58%                | 2.3019 | 0.25816               | 2.93%        |
| 008.05      | 1                       |                                 | 8.2500 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 008.08      | 41                      | 37                              | 7.4140 | 0.55490 | 7.3884                       | 0.61816                  | 0.06999                  | 8.37%          | 0.53576         | 0.20433        | 0.57340            | 7.23%             | 2.76%            | 7.73%                | 2.8063 | 0.23286               | 2.96%        |
| 008.99      | 5                       | 5                               | 7.5193 | 1.3848  | 7.5193                       | 1.3848                   | 0.43792                  | 18.42%         | 1.3830          | 0.10222        | 1.3867             | 18.39%            | 1.36%            | 18.44%               | 13.567 | 0.09580               | 2.95%        |
| 009.04      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 009.07      | 10                      | 8                               | 18.344 | 0.76689 | 18.314                       | 0.72249                  | 0.17029                  | 3.95%          | 0.75945         | 0.15077        | 0.77427            | 4.14%             | 0.82%            | 4.22%                | 5.1355 | 0.25000               | 2.58%        |
| 009.09      | 31                      | 29                              | 16.893 | 0.94263 | 16.835                       | 1.0161                   | 0.13117                  | 6.04%          | 0.90771         | 0.35949        | 0.97631            | 5.37%             | 2.13%            | 5.78%                | 2.7158 | 0.39633               | 2.62%        |
| 009.99      | 4                       | 3                               | 15.990 | 1.6038  | 18.205                       | 4.6195                   | 1.6332                   | 25.37%         | 1.6027          | 0.08583        | 1.6050             | 10.02%            | 0.54%            | 10.04%               | 18.700 | 0.59000               | 2.58%        |
| 010.03      | 6                       | 6                               | 10.737 | 1.4821  | 10.737                       | 1.6807                   | 0.48518                  | 15.65%         | 1.4744          | 0.21341        | 1.4898             | 13.73%            | 1.99%            | 13.87%               | 6.9807 | 0.26932               | 2.80%        |
| 010.11      | 4                       | 4                               | 12.019 | 0.73258 | 12.019                       | 0.73258                  | 0.25901                  | 6.10%          | 0.73188         | 0.04541        | 0.73328            | 6.09%             | 0.38%            | 6.10%                | 16.146 | 0.04750               | 2.75%        |
| 010.99      | 12                      | 12                              | 11.853 | 0.42910 | 11.845                       | 0.43463                  | 0.08872                  | 3.67%          | 0.42422         | 0.09125        | 0.43393            | 3.58%             | 0.77%            | 3.66%                | 4.7554 | 0.10152               | 2.76%        |
| 011.01      | 163                     | 79                              | 12.957 | 0.40120 | 12.943                       | 0.39436                  | 0.03098                  | 3.05%          | 0.39131         | 0.12517        | 0.41084            | 3.02%             | 0.97%            | 3.17%                | 3.2824 | 0.13454               | 2.72%        |
| 011.02      | 4                       | 4                               | 12.593 | 0.43731 | 12.593                       | 0.43731                  | 0.15461                  | 3.47%          | 0.43380         | 0.07826        | 0.44080            | 3.44%             | 0.62%            | 3.50%                | 5.6323 | 0.09500               | 2.73%        |
| 011.03      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 011.99      | 3                       | 2                               | 12.640 | 0.01414 | 11.995                       | 1.1172                   | 0.45610                  | 9.31%          |                 | 0.25495        |                    |                   | 2.02%            |                      |        | 0.20333               | 2.75%        |
| 012.00      | 11                      | 10                              | 30.742 | 0.55454 | 30.739                       | 0.51316                  | 0.10941                  | 1.67%          | 0.52032         | 0.27125        | 0.58677            | 1.69%             | 0.88%            | 1.91%                | 2.1632 | 0.35818               | 2.39%        |
| 012.01      | 5                       | 5                               | 28.007 | 1.4129  | 28.007                       | 1.4129                   | 0.44679                  | 5.04%          | 1.2462          | 0.94153        | 1.5619             | 4.45%             | 3.36%            | 5.58%                | 1.6589 | 0.95980               | 2.42%        |
| 012.03      | 4                       | 3                               | 28.493 | 0.25032 | 27.783                       | 1.4363                   | 0.50780                  | 5.17%          | 0.06410         | 0.34220        | 0.34815            | 0.22%             | 1.20%            | 1.22%                | 1.0174 | 0.43000               | 2.43%        |
| 012.04      | 6                       | 6                               | 29.333 | 2.4903  | 29.271                       | 2.6997                   | 0.77935                  | 9.22%          | 2.4653          | 0.49800        | 2.5151             | 8.40%             | 1.70%            | 8.57%                | 5.0503 | 0.54167               | 2.41%        |
| 012.11      | 3                       | 3                               | 30.550 | 1.3473  | 30.550                       | 1.3473                   | 0.55005                  | 4.41%          | 1.3372          | 0.23374        | 1.3574             | 4.38%             | 0.77%            | 4.44%                | 5.8075 | 0.24667               | 2.39%        |

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|-------------|-------------------------|---------------------------------|--------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|-----------------------|--------------|
| 013.00      | 15                      | 14                              | 4.4200 | 0.39041 | 4.4130                       | 0.41254                  | 0.07796                  | 9.35%          | 0.38609         | 0.08190        | 0.39468            | 8.74%             | 1.85%            | 8.93%                | 4.8192 | 0.08857               | 3.20%        |
| 013.02      | 105                     | 29                              | 4.8247 | 0.58615 | 4.7822                       | 0.48731                  | 0.06291                  | 10.19%         | 0.58243         | 0.09319        | 0.58984            | 12.07%            | 1.93%            | 12.23%               | 6.3294 | 0.11567               | 3.16%        |
| 013.08      | 1                       |                                 | 2.8650 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 013.10      | 10                      | 9                               | 4.2494 | 0.38434 | 4.2315                       | 0.40240                  | 0.09485                  | 9.51%          | 0.38182         | 0.06205        | 0.38683            | 8.99%             | 1.46%            | 9.10%                | 6.2344 | 0.06556               | 3.22%        |
| 013.12      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 013.13      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 014.99      | 1                       |                                 | 20.700 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 015.41      | 5                       | 5                               | 103.69 | 11.407  | 103.69                       | 11.407                   | 3.6073                   | 11.00%         | 11.390          | 0.88116        | 11.424             | 10.98%            | 0.85%            | 11.02%               | 12.965 | 1.0389                | 7.96%        |
| 015.42      | 1                       |                                 | 112.50 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 015.43      | 4                       | 4                               | 105.29 | 27.350  | 105.29                       | 27.350                   | 9.6697                   | 25.98%         | 27.059          | 5.6309         | 27.638             | 25.70%            | 5.35%            | 26.25%               | 4.9083 | 6.7200                | 7.94%        |
| 015.52      | 1                       |                                 | 109.20 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 015.53      | 1                       |                                 | 105.50 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 017.41      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 017.42      | 3                       | 3                               | 7.7550 | 0.71227 | 7.7550                       | 0.71227                  | 0.29078                  | 9.18%          | 0.62342         | 0.48719        | 0.79120            | 8.04%             | 6.28%            | 10.20%               | 1.6240 | 0.53667               | 11.75%       |
| 017.43      | 4                       | 4                               | 6.4688 | 4.3767  | 6.4688                       | 4.3767                   | 1.5474                   | 67.66%         | 4.3739          | 0.22363        | 4.3796             | 67.62%            | 3.46%            | 67.70%               | 19.584 | 0.22250               | 12.08%       |
| 017.53      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 019.00      | 27                      | 24                              | 1.1695 | 0.04774 | 1.1659                       | 0.04998                  | 0.00680                  | 4.29%          | 0.04569         | 0.01958        | 0.04971            | 3.91%             | 1.67%            | 4.25%                | 2.5382 | 0.02503               | 3.91%        |
| 019.03      | 1                       |                                 | 1.1944 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 019.08      | 10                      | 9                               | 1.1660 | 0.05055 | 1.1756                       | 0.06411                  | 0.01433                  | 5.45%          | 0.05005         | 0.01003        | 0.05104            | 4.29%             | 0.86%            | 4.38%                | 5.0874 | 0.01010               | 3.90%        |
| 019.31      | 32                      | 29                              | 1.1452 | 0.05157 | 1.1459                       | 0.05121                  | 0.00661                  | 4.47%          | 0.04986         | 0.01864        | 0.05323            | 4.35%             | 1.63%            | 4.65%                | 2.8564 | 0.02406               | 3.92%        |
| 019.32      | 6                       | 6                               | 1.1200 | 0.12665 | 1.1447                       | 0.09150                  | 0.02641                  | 7.99%          | 0.12628         | 0.01369        | 0.12702            | 11.28%            | 1.22%            | 11.34%               | 9.2766 | 0.01363               | 3.92%        |
| 019.41      | 40                      | 36                              | 1.1861 | 0.06065 | 1.1899                       | 0.05204                  | 0.00589                  | 4.37%          | 0.05899         | 0.01995        | 0.06227            | 4.97%             | 1.68%            | 5.25%                | 3.1207 | 0.02363               | 3.90%        |
| 019.42      | 20                      | 19                              | 1.1818 | 0.07109 | 1.1941                       | 0.06763                  | 0.01069                  | 5.66%          | 0.06901         | 0.02414        | 0.07312            | 5.84%             | 2.04%            | 6.19%                | 3.0284 | 0.02627               | 3.89%        |
| 019.43      | 21                      | 19                              | 1.1907 | 0.08952 | 1.1967                       | 0.08271                  | 0.01308                  | 6.91%          | 0.08834         | 0.02049        | 0.09068            | 7.42%             | 1.72%            | 7.62%                | 4.4258 | 0.02450               | 3.89%        |
| 019.44      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 019.52      | 1                       |                                 | 1.0323 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 019.53      | 5                       | 5                               | 1.1898 | 0.09524 | 1.1898                       | 0.09524                  | 0.03012                  | 8.00%          | 0.09228         | 0.03330        | 0.09811            | 7.76%             | 2.80%            | 8.25%                | 2.9463 | 0.04080               | 3.90%        |
| 019.99      | 4                       | 3                               | 1.1187 | 0.01677 | 1.0578                       | 0.12260                  | 0.04335                  | 11.59%         |                 | 0.05126        |                    |                   | 4.58%            |                      |        | 0.23150               | 3.97%        |
| 021.31      | 3                       | 2                               | 3.0000 | 1.4142  | 3.2817                       | 1.1127                   | 0.45424                  | 33.91%         | 1.4142          | 0.00000        | 1.4142             | 47.14%            | 0.00%            | 47.14%               |        | 0.10333               | 13.38%       |
| 021.41      | 4                       | 3                               | 1.7922 | 0.57829 | 1.7579                       | 0.47712                  | 0.16869                  | 27.14%         | 0.57815         | 0.01775        | 0.57842            | 32.26%            | 0.99%            | 32.28%               | 32.590 | 0.09200               | 14.69%       |
| 021.42      | 3                       | 2                               | 1.5475 | 0.01061 | 1.2412                       | 0.53064                  | 0.21663                  | 42.75%         |                 | 0.20597        |                    |                   | 13.31%           |                      |        | 0.30833               | 15.48%       |
| 021.43      | 4                       | 4                               | 1.8125 | 0.21838 | 1.8125                       | 0.21838                  | 0.07721                  | 12.05%         | 0.20067         | 0.12186        | 0.23477            | 11.07%            | 6.72%            | 12.95%               | 1.9265 | 0.12500               | 14.63%       |
| 021.52      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 021.53      | 3                       | 3                               | 1.3883 | 0.28436 | 1.3883                       | 0.28436                  | 0.11609                  | 20.48%         | 0.22320         | 0.24917        | 0.33451            | 16.08%            | 17.95%           | 24.09%               | 1.3425 | 0.29000               | 15.23%       |
| 022.31      | 17                      | 15                              | 21.696 | 1.4147  | 21.631                       | 0.95403                  | 0.16865                  | 4.41%          | 1.3618          | 0.54180        | 1.4656             | 6.28%             | 2.50%            | 6.76%                | 2.7051 | 0.56112               | 10.07%       |
| 022.32      | 3                       | 3                               | 25.588 | 2.8889  | 25.588                       | 2.8889                   | 1.1794                   | 11.29%         | 2.4350          | 2.1986         | 3.2807             | 9.52%             | 8.59%            | 12.82%               | 1.4922 | 2.3500                | 9.82%        |
| 022.33      | 2                       | 0                               |        |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 022.41      | 25                      | 24                              | 21.700 | 2.4368  | 21.677                       | 2.4307                   | 0.34375                  | 11.21%         | 2.1621          | 1.5895         | 2.6835             | 9.96%             | 7.32%            | 12.37%               | 1.6883 | 1.8456                | 10.07%       |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean    | SD      | Assigned Value - Robust Mean | AAFCO CS fp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  | Average Range (R-bar) | Horwitz %RSD |
|-------------|-------------------------|---------------------------------|---------|---------|------------------------------|-------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|-----------------------|--------------|
| 022.42      | 13                      | 13                              | 23.147  | 2.1255  | 22.962                       | 1.9816                  | 0.38863                  | 8.63%          | 2.0863          | 0.57445        | 2.1639             | 9.01%             | 2.48%            | 9.35%                | 3.7670 | 0.69000               | 9.98%        |
| 022.43      | 16                      | 14                              | 22.722  | 1.8567  | 23.018                       | 1.4054                  | 0.25659                  | 6.11%          | 1.7077          | 1.0306         | 1.9946             | 7.52%             | 4.54%            | 8.78%                | 1.9354 | 1.3540                | 9.98%        |
| 022.44      | 1                       |                                 | 24.250  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 022.52      | 1                       |                                 | 19.295  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 022.53      | 3                       | 3                               | 23.367  | 0.95438 | 23.367                       | 0.95438                 | 0.38962                  | 4.08%          |                 | 1.8771         |                    |                   | 8.03%            |                      |        | 2.4000                | 9.96%        |
| 025.31      | 22                      | 20                              | 245.22  | 14.201  | 244.46                       | 16.183                  | 2.4972                   | 6.62%          | 13.887          | 4.2011         | 14.509             | 5.66%             | 1.71%            | 5.92%                | 3.4536 | 5.0576                | 6.99%        |
| 025.32      | 3                       | 2                               | 243.79  | 0.15556 | 225.03                       | 32.499                  | 13.268                   | 14.44%         |                 | 5.4709         |                    |                   | 2.24%            |                      |        | 5.3800                | 7.08%        |
| 025.33      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 025.34      | 1                       |                                 | 232.04  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 025.41      | 31                      | 28                              | 235.62  | 11.692  | 235.87                       | 12.625                  | 1.6578                   | 5.35%          | 11.128          | 5.0744         | 12.230             | 4.72%             | 2.15%            | 5.19%                | 2.4102 | 6.1483                | 7.03%        |
| 025.42      | 15                      | 14                              | 234.17  | 18.504  | 230.22                       | 13.812                  | 2.5217                   | 6.00%          | 17.790          | 7.1978         | 19.191             | 7.60%             | 3.07%            | 8.20%                | 2.6662 | 6.3920                | 7.06%        |
| 025.43      | 17                      | 15                              | 223.01  | 19.968  | 225.72                       | 22.280                  | 3.9386                   | 9.87%          | 19.579          | 5.5438         | 20.349             | 8.78%             | 2.49%            | 9.12%                | 3.6705 | 6.5331                | 7.08%        |
| 025.52      | 1                       |                                 | 190.78  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 025.53      | 4                       | 4                               | 231.50  | 9.1013  | 231.50                       | 9.1013                  | 3.2178                   | 3.93%          | 3.6686          | 11.779         | 12.337             | 1.58%             | 5.09%            | 5.33%                | 1.0474 | 12.000                | 7.05%        |
| 027.31      | 17                      | 13                              | 0.35443 | 0.01728 | 0.35283                      | 0.01677                 | 0.00306                  | 4.75%          | 0.01679         | 0.00581        | 0.01776            | 4.74%             | 1.64%            | 5.01%                | 3.0560 | 0.00700               | 4.68%        |
| 027.32      | 4                       | 4                               | 0.35008 | 0.02797 | 0.35008                      | 0.02797                 | 0.00989                  | 7.99%          | 0.02784         | 0.00387        | 0.02810            | 7.95%             | 1.11%            | 8.03%                | 7.2650 | 0.00375               | 4.68%        |
| 027.33      | 1                       |                                 | 0.33000 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 027.34      | 1                       |                                 | 3.4620  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 027.41      | 27                      | 26                              | 0.37049 | 0.01714 | 0.37109                      | 0.01616                 | 0.00220                  | 4.35%          | 0.01598         | 0.00874        | 0.01822            | 4.31%             | 2.36%            | 4.92%                | 2.0846 | 0.00936               | 4.64%        |
| 027.42      | 14                      | 12                              | 0.36052 | 0.02120 | 0.36097                      | 0.01776                 | 0.00348                  | 4.92%          | 0.02098         | 0.00437        | 0.02143            | 5.82%             | 1.21%            | 5.94%                | 4.9045 | 0.00568               | 4.66%        |
| 027.43      | 16                      | 14                              | 0.35268 | 0.02728 | 0.35727                      | 0.02269                 | 0.00414                  | 6.35%          | 0.02707         | 0.00475        | 0.02749            | 7.68%             | 1.35%            | 7.79%                | 5.7898 | 0.00567               | 4.67%        |
| 027.44      | 1                       |                                 | 0.36550 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 027.52      | 1                       |                                 | 0.33530 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 027.53      | 3                       | 2                               | 0.35478 | 0.00032 | 0.36635                      | 0.02005                 | 0.00819                  | 5.47%          |                 | 0.00513        |                    |                   | 1.45%            |                      |        | 0.00710               | 4.65%        |
| 028.31      | 19                      | 17                              | 134.88  | 9.0544  | 136.49                       | 7.6748                  | 1.2791                   | 5.62%          | 8.9310          | 2.1069         | 9.1761             | 6.62%             | 1.56%            | 6.80%                | 4.3554 | 2.4105                | 7.63%        |
| 028.32      | 3                       | 3                               | 137.97  | 0.50332 | 137.97                       | 0.50332                 | 0.20548                  | 0.36%          |                 | 2.1385         |                    |                   | 1.55%            |                      |        | 2.4000                | 7.62%        |
| 028.33      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 028.41      | 29                      | 27                              | 133.14  | 5.7726  | 133.76                       | 5.9425                  | 0.78028                  | 4.44%          | 5.2396          | 3.4262         | 6.2604             | 3.94%             | 2.57%            | 4.70%                | 1.8272 | 4.1505                | 7.66%        |
| 028.42      | 18                      | 15                              | 137.14  | 6.3266  | 138.18                       | 6.7034                  | 1.1850                   | 4.85%          | 6.0840          | 2.4538         | 6.5602             | 4.44%             | 1.79%            | 4.78%                | 2.6735 | 4.0500                | 7.62%        |
| 028.43      | 16                      | 16                              | 132.91  | 11.317  | 132.60                       | 12.147                  | 2.1473                   | 9.16%          | 10.883          | 4.3915         | 11.735             | 8.19%             | 3.30%            | 8.83%                | 2.6723 | 4.5706                | 7.67%        |
| 028.44      | 3                       | 3                               | 91.818  | 64.098  | 91.818                       | 64.098                  | 26.168                   | 69.81%         | 63.987          | 5.3229         | 64.208             | 69.69%            | 5.80%            | 69.93%               | 12.063 | 6.0033                | 8.10%        |
| 028.52      | 1                       |                                 | 118.87  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 028.53      | 5                       | 4                               | 142.63  | 6.3163  | 847.10                       | 1,575.3                 | 498.14                   | 185.96%        | 5.4620          | 4.4861         | 7.0681             | 3.83%             | 3.15%            | 4.96%                | 1.5756 | 18.600                | 5.80%        |
| 031.00      | 1                       |                                 | 0.77520 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 031.01      | 62                      | 56                              | 0.77168 | 0.02096 | 0.77231                      | 0.01961                 | 0.00179                  | 2.54%          | 0.01984         | 0.00956        | 0.02202            | 2.57%             | 1.24%            | 2.85%                | 2.3040 | 0.01197               | 4.16%        |
| 031.02      | 3                       | 3                               | 0.78057 | 0.01261 | 0.78057                      | 0.01261                 | 0.00515                  | 1.62%          | 0.01189         | 0.00592        | 0.01328            | 1.52%             | 0.76%            | 1.70%                | 2.2442 | 0.00773               | 4.15%        |
| 031.03      | 5                       | 4                               | 0.78979 | 0.01711 | 0.77283                      | 0.04071                 | 0.01287                  | 5.27%          | 0.01661         | 0.00581        | 0.01759            | 2.10%             | 0.74%            | 2.23%                | 3.0295 | 0.02278               | 4.16%        |
| 031.06      | 1                       |                                 | 0.76950 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean    | SD      | Assigned Value - Robust Mean | AAFCO CS ftp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  | Average Range (R-bar) | Horwitz %RSD |
|-------------|-------------------------|---------------------------------|---------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|-----------------------|--------------|
| 031.41      | 37                      | 32                              | 0.78394 | 0.02696 | 0.78531                      | 0.02788                  | 0.00329                  | 3.55%          | 0.02565         | 0.01174        | 0.02821            | 3.27%             | 1.50%            | 3.60%                | 2.4028 | 0.01386               | 4.15%        |
| 031.42      | 20                      | 18                              | 0.76368 | 0.03066 | 0.76441                      | 0.03109                  | 0.00504                  | 4.07%          | 0.02884         | 0.01472        | 0.03238            | 3.78%             | 1.93%            | 4.24%                | 2.1999 | 0.01788               | 4.16%        |
| 031.43      | 20                      | 18                              | 0.76547 | 0.04220 | 0.77032                      | 0.04439                  | 0.00720                  | 5.76%          | 0.04137         | 0.01177        | 0.04301            | 5.40%             | 1.54%            | 5.62%                | 3.6550 | 0.01542               | 4.16%        |
| 031.44      | 2                       | 0                               |         |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 031.52      | 1                       |                                 | 0.68480 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 031.53      | 5                       | 5                               | 0.76155 | 0.02475 | 0.76155                      | 0.02475                  | 0.00783                  | 3.25%          | 0.02020         | 0.02022        | 0.02858            | 2.65%             | 2.65%            | 3.75%                | 1.4136 | 0.02582               | 4.17%        |
| 031.99      | 5                       | 4                               | 0.75713 | 0.03748 | 0.71970                      | 0.08976                  | 0.02838                  | 12.47%         | 0.03733         | 0.00476        | 0.03763            | 4.93%             | 0.63%            | 4.97%                | 7.9112 | 0.01580               | 4.20%        |
| 032.02      | 7                       | 7                               | 1.1462  | 0.07202 | 1.1363                       | 0.05972                  | 0.01596                  | 5.26%          | 0.06967         | 0.02584        | 0.07430            | 6.08%             | 2.25%            | 6.48%                | 2.8759 | 0.02443               | 3.92%        |
| 032.31      | 24                      | 23                              | 1.1749  | 0.07410 | 1.1891                       | 0.06051                  | 0.00873                  | 5.09%          | 0.07125         | 0.02879        | 0.07685            | 6.06%             | 2.45%            | 6.54%                | 2.6688 | 0.02804               | 3.90%        |
| 032.32      | 3                       | 3                               | 1.1837  | 0.06313 | 1.1837                       | 0.06313                  | 0.02577                  | 5.33%          | 0.06300         | 0.00577        | 0.06326            | 5.32%             | 0.49%            | 5.34%                | 10.957 | 0.00667               | 3.90%        |
| 032.41      | 32                      | 28                              | 1.1989  | 0.04923 | 1.2020                       | 0.05149                  | 0.00665                  | 4.28%          | 0.04691         | 0.02115        | 0.05146            | 3.91%             | 1.76%            | 4.29%                | 2.4325 | 0.02858               | 3.89%        |
| 032.42      | 18                      | 17                              | 1.2012  | 0.05308 | 1.2014                       | 0.02585                  | 0.00443                  | 2.15%          | 0.04876         | 0.02965        | 0.05707            | 4.06%             | 2.47%            | 4.75%                | 1.9249 | 0.03332               | 3.89%        |
| 032.43      | 16                      | 15                              | 1.1740  | 0.08087 | 1.1826                       | 0.07618                  | 0.01391                  | 6.44%          | 0.07909         | 0.02389        | 0.08262            | 6.74%             | 2.03%            | 7.04%                | 3.4583 | 0.02340               | 3.90%        |
| 032.44      | 1                       |                                 | 1.2050  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 032.52      | 1                       |                                 | 1.0759  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 032.53      | 5                       | 5                               | 1.2577  | 0.06630 | 1.2577                       | 0.06630                  | 0.02097                  | 5.27%          | 0.06440         | 0.02231        | 0.06815            | 5.12%             | 1.77%            | 5.42%                | 3.0548 | 0.02660               | 3.86%        |
| 032.99      | 1                       |                                 | 0.94400 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 033.00      | 26                      | 24                              | 0.94453 | 0.04850 | 0.94113                      | 0.04271                  | 0.00604                  | 4.54%          | 0.04773         | 0.01217        | 0.04925            | 5.05%             | 1.29%            | 5.21%                | 4.0476 | 0.01571               | 4.04%        |
| 033.01      | 32                      | 29                              | 1.0164  | 0.02676 | 1.0175                       | 0.02390                  | 0.00304                  | 2.35%          | 0.02603         | 0.00878        | 0.02747            | 2.56%             | 0.86%            | 2.70%                | 3.1296 | 0.01193               | 3.99%        |
| 033.03      | 4                       | 3                               | 0.93667 | 0.07234 | 0.71250                      | 0.45221                  | 0.15988                  | 63.47%         | 0.06819         | 0.03415        | 0.07626            | 7.28%             | 3.65%            | 8.14%                | 2.2334 | 0.02850               | 4.21%        |
| 033.05      | 4                       | 4                               | 1.0397  | 0.06292 | 1.0397                       | 0.06292                  | 0.02225                  | 6.05%          | 0.06237         | 0.01175        | 0.06347            | 6.00%             | 1.13%            | 6.10%                | 5.3995 | 0.01308               | 3.98%        |
| 033.99      | 7                       | 6                               | 0.87892 | 0.16810 | 0.90815                      | 0.12917                  | 0.03729                  | 14.22%         | 0.16700         | 0.02717        | 0.16920            | 19.00%            | 3.09%            | 19.25%               | 6.2265 | 0.02817               | 4.06%        |
| 034.01      | 1                       |                                 | 0.76500 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 034.04      | 5                       | 5                               | 0.66940 | 0.03093 | 0.66940                      | 0.03093                  | 0.00978                  | 4.62%          | 0.02932         | 0.01394        | 0.03247            | 4.38%             | 2.08%            | 4.85%                | 2.3285 | 0.01360               | 16.99%       |
| 034.31      | 1                       |                                 | 13.000  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 034.41      | 1                       |                                 | 0.60600 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 034.42      | 2                       | 0                               |         |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 034.43      | 1                       |                                 | 0.00000 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 034.52      | 2                       | 0                               |         |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 034.53      | 6                       | 5                               | 0.77010 | 0.07338 | 0.74083                      | 0.09402                  | 0.02714                  | 12.69%         | 0.06510         | 0.04788        | 0.08081            | 8.45%             | 6.22%            | 10.49%               | 1.6879 | 0.04283               | 16.74%       |
| 034.99      | 1                       |                                 | 0.47000 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 035.01      | 3                       | 3                               | 0.39400 | 0.03683 | 0.39400                      | 0.03683                  | 0.01504                  | 9.35%          | 0.03669         | 0.00458        | 0.03698            | 9.31%             | 1.16%            | 9.38%                | 8.0689 | 0.00600               | 4.60%        |
| 035.05      | 9                       | 7                               | 0.40007 | 0.01292 | 0.39650                      | 0.01658                  | 0.00391                  | 4.18%          | 0.01253         | 0.00448        | 0.01331            | 3.13%             | 1.12%            | 3.33%                | 2.9702 | 0.00640               | 4.60%        |
| 035.31      | 25                      | 24                              | 0.39387 | 0.05809 | 0.39027                      | 0.03474                  | 0.00491                  | 8.90%          | 0.05770         | 0.00955        | 0.05848            | 14.65%            | 2.42%            | 14.85%               | 6.1234 | 0.01012               | 4.61%        |
| 035.32      | 4                       | 4                               | 0.36230 | 0.07530 | 0.36230                      | 0.07530                  | 0.02662                  | 20.78%         | 0.07515         | 0.00667        | 0.07544            | 20.74%            | 1.84%            | 20.82%               | 11.307 | 0.00660               | 4.66%        |
| 035.41      | 37                      | 33                              | 0.39688 | 0.02231 | 0.39971                      | 0.01676                  | 0.00200                  | 4.19%          | 0.02146         | 0.00863        | 0.02313            | 5.41%             | 2.18%            | 5.83%                | 2.6795 | 0.00939               | 4.59%        |
| 035.42      | 16                      | 13                              | 0.40738 | 0.02793 | 0.40281                      | 0.01694                  | 0.00309                  | 4.21%          | 0.02766         | 0.00550        | 0.02820            | 6.79%             | 1.35%            | 6.92%                | 5.1232 | 0.00679               | 4.59%        |
| 035.43      | 13                      | 10                              | 0.39870 | 0.02931 | 0.40173                      | 0.02532                  | 0.00517                  | 6.30%          | 0.02840         | 0.01025        | 0.03019            | 7.12%             | 2.57%            | 7.57%                | 2.9465 | 0.01342               | 4.59%        |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean    | SD      | Assigned Value - Robust Mean | AAFCO CS ftp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  | Average Range (R-bar) | Horwitz %RSD |
|-------------|-------------------------|---------------------------------|---------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|-----------------------|--------------|
| 035.52      | 1                       |                                 | 0.36360 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 035.53      | 5                       | 5                               | 0.39308 | 0.01783 | 0.39308                      | 0.01783                  | 0.00564                  | 4.54%          | 0.01710         | 0.00711        | 0.01852            | 4.35%             | 1.81%            | 4.71%                | 2.6041 | 0.00644               | 4.60%        |
| 036.00      | 1                       |                                 | 0.35550 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 036.04      | 4                       | 4                               | 0.33875 | 0.01931 | 0.33875                      | 0.01931                  | 0.00683                  | 5.70%          | 0.01848         | 0.00791        | 0.02010            | 5.46%             | 2.33%            | 5.93%                | 2.5430 | 0.00750               | 4.71%        |
| 036.42      | 15                      | 13                              | 0.33204 | 0.01502 | 0.33459                      | 0.00895                  | 0.00163                  | 2.67%          | 0.01359         | 0.00903        | 0.01632            | 4.09%             | 2.72%            | 4.92%                | 1.8067 | 0.00907               | 4.72%        |
| 036.43      | 11                      | 11                              | 0.33873 | 0.03168 | 0.33741                      | 0.03219                  | 0.00686                  | 9.54%          | 0.03043         | 0.01248        | 0.03289            | 8.98%             | 3.68%            | 9.71%                | 2.6355 | 0.00982               | 4.71%        |
| 036.53      | 1                       |                                 | 0.35000 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 037.31      | 22                      | 20                              | 146.34  | 7.3679  | 146.78                       | 7.9497                   | 1.2267                   | 5.42%          | 7.2220          | 2.0637         | 7.5110             | 4.94%             | 1.41%            | 5.13%                | 3.6396 | 2.7695                | 7.55%        |
| 037.32      | 3                       | 3                               | 300.98  | 258.64  | 300.98                       | 258.64                   | 105.59                   | 85.93%         | 258.64          | 2.1012         | 258.64             | 85.93%            | 0.70%            | 85.93%               | 123.09 | 2.2333                | 6.78%        |
| 037.33      | 2                       | 0                               |         |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 037.41      | 29                      | 28                              | 147.68  | 8.0777  | 147.99                       | 8.4541                   | 1.1297                   | 5.71%          | 7.6674          | 3.5942         | 8.4680             | 5.19%             | 2.43%            | 5.73%                | 2.3560 | 3.7651                | 7.54%        |
| 037.42      | 17                      | 14                              | 152.28  | 9.9409  | 150.30                       | 8.3048                   | 1.4243                   | 5.53%          | 9.2568          | 5.1252         | 10.581             | 6.08%             | 3.37%            | 6.95%                | 2.0645 | 8.7312                | 7.52%        |
| 037.43      | 18                      | 16                              | 144.25  | 12.467  | 144.83                       | 13.645                   | 2.3401                   | 9.42%          | 12.003          | 4.7634         | 12.914             | 8.32%             | 3.30%            | 8.95%                | 2.7111 | 6.0112                | 7.57%        |
| 037.44      | 2                       | 0                               |         |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 037.52      | 1                       |                                 | 149.54  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 037.53      | 5                       | 5                               | 146.30  | 14.936  | 146.30                       | 14.936                   | 4.7231                   | 10.21%         | 14.343          | 5.8907         | 15.506             | 9.80%             | 4.03%            | 10.60%               | 2.6322 | 6.6000                | 7.55%        |
| 038.41      | 3                       | 3                               | 1.5260  | 0.13861 | 1.5260                       | 0.13861                  | 0.05659                  | 9.08%          | 0.11151         | 0.11642        | 0.16121            | 7.31%             | 7.63%            | 10.56%               | 1.3847 | 0.14767               | 15.01%       |
| 038.42      | 3                       | 2                               | 0.89500 | 1.2657  | 1.0367                       | 0.92803                  | 0.37887                  | 89.52%         | 1.2657          | 0.00000        | 1.2657             | 141.42%           | 0.00%            | 141.42%              |        | 0.02000               | 15.91%       |
| 038.43      | 6                       | 5                               | 1.6380  | 0.21956 | 1.5633                       | 0.18355                  | 0.05299                  | 11.74%         | 0.21651         | 0.05158        | 0.22257            | 13.22%            | 3.15%            | 13.59%               | 4.3155 | 0.04667               | 14.96%       |
| 038.52      | 2                       | 0                               |         |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 038.53      | 3                       | 3                               | 1.5850  | 0.08047 | 1.5850                       | 0.08047                  | 0.03285                  | 5.08%          | 0.07979         | 0.01472        | 0.08114            | 5.03%             | 0.93%            | 5.12%                | 5.5122 | 0.01667               | 14.93%       |
| 054.01      | 10                      | 9                               | 15.329  | 0.90940 | 15.363                       | 0.96765                  | 0.22808                  | 6.30%          | 0.86908         | 0.37870        | 0.94801            | 5.67%             | 2.47%            | 6.18%                | 2.5033 | 0.40856               | 9.41%        |
| 054.02      | 4                       | 4                               | 15.402  | 0.46607 | 15.402                       | 0.46607                  | 0.16478                  | 3.03%          | 0.41161         | 0.30917        | 0.51479            | 2.67%             | 2.01%            | 3.34%                | 1.6651 | 0.39300               | 9.41%        |
| 057.01      | 1                       |                                 | 0.00000 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 057.99      | 1                       |                                 | 0.05600 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 101.01      | 1                       |                                 | 537.50  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 101.02      | 1                       |                                 | 463.40  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 101.99      | 1                       |                                 | 688.50  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 102.01      | 1                       |                                 | 57.205  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 103.01      | 1                       |                                 | 22.905  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 104.00      | 2                       | 0                               |         |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 104.03      | 1                       |                                 | 7.2500  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 105.00      | 1                       |                                 | 1.8500  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 106.00      | 2                       | 0                               |         |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 106.01      | 1                       |                                 | 6.6595  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 106.02      | 22                      | 21                              | 5.8831  | 2.0173  | 5.8077                       | 2.1063                   | 0.32501                  | 36.27%         | 1.9498          | 0.73202        | 2.0826             | 33.14%            | 12.44%           | 35.40%               | 2.8451 | 0.77331               |              |
| 108.01      | 1                       |                                 | 1.5400  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 108.02      | 3                       | 3                               | 2.2600  | 0.65939 | 2.2600                       | 0.65939                  | 0.26920                  | 29.18%         | 0.65549         | 0.10132        | 0.66327            | 29.00%            | 4.48%            | 29.35%               | 6.5460 | 0.10667               |              |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean    | SD      | Assigned Value - Robust Mean | AAFCO CS ftp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  | Average Range (R-bar) | Horwitz %RSD |
|-------------|-------------------------|---------------------------------|---------|---------|------------------------------|--------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|-----------------------|--------------|
| 109.00      | 1                       |                                 | 114.00  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 109.02      | 16                      | 15                              | 127.77  | 16.461  | 125.18                       | 18.253                   | 3.2267                   | 14.58%         | 15.997          | 5.4879         | 16.912             | 12.52%            | 4.30%            | 13.24%               | 3.0817 | 5.3184                | 7.73%        |
| 109.99      | 1                       |                                 | 75.000  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 120.00      | 17                      | 15                              | 0.85863 | 0.02486 | 0.86290                      | 0.02381                  | 0.00421                  | 2.76%          | 0.02356         | 0.01124        | 0.02610            | 2.74%             | 1.31%            | 3.04%                | 2.3226 | 0.01556               | 4.09%        |
| 120.01      | 1                       |                                 | 0.77600 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 120.02      | 3                       | 3                               | 0.86467 | 0.00839 | 0.86467                      | 0.00839                  | 0.00342                  | 0.97%          | 0.00785         | 0.00418        | 0.00889            | 0.91%             | 0.48%            | 1.03%                | 2.1291 | 0.00427               | 4.09%        |
| 120.05      | 5                       | 5                               | 0.84510 | 0.01727 | 0.84510                      | 0.01727                  | 0.00546                  | 2.04%          | 0.01440         | 0.01347        | 0.01972            | 1.70%             | 1.59%            | 2.33%                | 1.4638 | 0.01660               | 4.10%        |
| 121.00      | 17                      | 16                              | 1.3116  | 0.04923 | 1.3117                       | 0.03410                  | 0.00603                  | 2.60%          | 0.04775         | 0.01696        | 0.05067            | 3.64%             | 1.29%            | 3.86%                | 2.9872 | 0.02048               | 3.84%        |
| 121.01      | 1                       |                                 | 1.2140  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 121.02      | 3                       | 3                               | 1.2832  | 0.05381 | 1.2832                       | 0.05381                  | 0.02197                  | 4.19%          | 0.04909         | 0.03116        | 0.05814            | 3.83%             | 2.43%            | 4.53%                | 1.8660 | 0.03500               | 3.85%        |
| 121.05      | 5                       | 5                               | 1.2499  | 0.07254 | 1.2499                       | 0.07254                  | 0.02294                  | 5.80%          | 0.06116         | 0.05518        | 0.08237            | 4.89%             | 4.41%            | 6.59%                | 1.4927 | 0.06100               | 3.87%        |
| 122.00      | 16                      | 15                              | 1.5990  | 0.04475 | 1.5925                       | 0.05172                  | 0.00914                  | 3.25%          | 0.04279         | 0.01853        | 0.04663            | 2.68%             | 1.16%            | 2.92%                | 2.5160 | 0.01986               | 3.73%        |
| 122.01      | 1                       |                                 | 1.4165  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 122.02      | 3                       | 3                               | 1.6098  | 0.05390 | 1.6098                       | 0.05390                  | 0.02200                  | 3.35%          | 0.04228         | 0.04726        | 0.06342            | 2.63%             | 2.94%            | 3.94%                | 1.3418 | 0.06170               | 3.72%        |
| 122.05      | 5                       | 5                               | 1.5563  | 0.05294 | 1.5563                       | 0.05294                  | 0.01674                  | 3.40%          | 0.03471         | 0.05653        | 0.06634            | 2.23%             | 3.63%            | 4.26%                | 1.1735 | 0.06020               | 3.74%        |
| 123.99      | 1                       |                                 | 3.3800  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 124.00      | 16                      | 14                              | 0.33811 | 0.02328 | 0.33577                      | 0.01551                  | 0.00283                  | 4.62%          | 0.02309         | 0.00419        | 0.02347            | 6.83%             | 1.24%            | 6.94%                | 5.5969 | 0.00606               | 4.71%        |
| 124.01      | 1                       |                                 | 0.30800 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 124.02      | 2                       | 0                               |         |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 124.05      | 3                       | 3                               | 0.30883 | 0.09825 | 0.30883                      | 0.09825                  | 0.04011                  | 31.81%         | 0.09781         | 0.01325        | 0.09870            | 31.67%            | 4.29%            | 31.96%               | 7.4502 | 0.01700               | 4.77%        |
| 125.00      | 15                      | 14                              | 3.3994  | 0.15566 | 3.3713                       | 0.09253                  | 0.01749                  | 2.74%          | 0.15438         | 0.02820        | 0.15694            | 4.54%             | 0.83%            | 4.62%                | 5.5642 | 0.03512               | 3.33%        |
| 125.01      | 1                       |                                 | 3.2065  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 125.02      | 3                       | 3                               | 3.3038  | 0.08387 | 3.3038                       | 0.08387                  | 0.03424                  | 2.54%          | 0.06576         | 0.07363        | 0.09871            | 1.99%             | 2.23%            | 2.99%                | 1.3408 | 0.08763               | 3.34%        |
| 125.05      | 5                       | 5                               | 3.2343  | 0.08333 | 3.2343                       | 0.08333                  | 0.02635                  | 2.58%          | 0.02909         | 0.11043        | 0.11420            | 0.90%             | 3.41%            | 3.53%                | 1.0341 | 0.11740               | 3.35%        |
| 126.00      | 16                      | 15                              | 0.80313 | 0.02681 | 0.80470                      | 0.02630                  | 0.00465                  | 3.27%          | 0.02609         | 0.00871        | 0.02751            | 3.25%             | 1.08%            | 3.42%                | 3.1590 | 0.01241               | 4.13%        |
| 126.01      | 1                       |                                 | 0.75100 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 126.02      | 3                       | 3                               | 0.82838 | 0.02607 | 0.82838                      | 0.02607                  | 0.01064                  | 3.15%          | 0.02500         | 0.01046        | 0.02710            | 3.02%             | 1.26%            | 3.27%                | 2.5900 | 0.01277               | 4.11%        |
| 126.05      | 5                       | 4                               | 0.79163 | 0.01575 | 0.79970                      | 0.02263                  | 0.00716                  | 2.83%          | 0.01445         | 0.00885        | 0.01695            | 1.83%             | 1.12%            | 2.14%                | 1.9144 | 0.02700               | 4.14%        |
| 127.00      | 17                      | 15                              | 0.47419 | 0.01830 | 0.47043                      | 0.01139                  | 0.00201                  | 2.42%          | 0.01750         | 0.00756        | 0.01907            | 3.69%             | 1.59%            | 4.02%                | 2.5228 | 0.00960               | 4.48%        |
| 127.01      | 1                       |                                 | 0.36800 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 127.02      | 3                       | 3                               | 0.46860 | 0.03353 | 0.46860                      | 0.03353                  | 0.01369                  | 7.16%          | 0.03241         | 0.01214        | 0.03461            | 6.92%             | 2.59%            | 7.39%                | 2.8506 | 0.01587               | 4.48%        |
| 127.05      | 5                       | 4                               | 0.45950 | 0.01666 | 0.46320                      | 0.01663                  | 0.00526                  | 3.59%          | 0.01635         | 0.00458        | 0.01698            | 3.56%             | 1.00%            | 3.69%                | 3.7044 | 0.02240               | 4.49%        |
| 128.00      | 16                      | 16                              | 0.64816 | 0.03464 | 0.65006                      | 0.02714                  | 0.00480                  | 4.18%          | 0.03340         | 0.01300        | 0.03584            | 5.15%             | 2.01%            | 5.53%                | 2.7566 | 0.01520               | 4.27%        |
| 128.01      | 1                       |                                 | 0.62700 |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 128.02      | 3                       | 3                               | 0.63215 | 0.01495 | 0.63215                      | 0.01495                  | 0.00610                  | 2.37%          | 0.01425         | 0.00639        | 0.01562            | 2.25%             | 1.01%            | 2.47%                | 2.4434 | 0.00770               | 4.29%        |
| 128.05      | 5                       | 5                               | 0.64280 | 0.01400 | 0.64280                      | 0.01400                  | 0.00443                  | 2.18%          | 0.00355         | 0.01916        | 0.01948            | 0.55%             | 2.98%            | 3.03%                | 1.0170 | 0.02160               | 4.27%        |
| 129.00      | 16                      | 15                              | 1.3098  | 0.02839 | 1.3095                       | 0.03157                  | 0.00576                  | 2.41%          | 0.02623         | 0.01535        | 0.03039            | 2.00%             | 1.17%            | 2.32%                | 1.9802 | 0.01803               | 3.84%        |
| 129.01      | 1                       |                                 | 1.2495  |         |                              |                          |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean    | SD      | Assigned Value - Robust Mean | AAFCO CS fp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  | Average Range (R-bar) | Horwitz %RSD |
|-------------|-------------------------|---------------------------------|---------|---------|------------------------------|-------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|-----------------------|--------------|
| 129.02      | 3                       | 3                               | 1.3117  | 0.01199 | 1.3117                       | 0.01199                 | 0.00489                  | 0.91%          | 0.00262         | 0.01654        | 0.01675            | 0.20%             | 1.26%            | 1.28%                | 1.0125 | 0.01617               | 3.84%        |
| 129.05      | 5                       | 5                               | 1.2852  | 0.03093 | 1.2852                       | 0.03093                 | 0.00978                  | 2.41%          | 0.02129         | 0.03173        | 0.03821            | 1.66%             | 2.47%            | 2.97%                | 1.2043 | 0.03720               | 3.85%        |
| 130.00      | 16                      | 15                              | 0.77403 | 0.02877 | 0.77270                      | 0.02271                 | 0.00415                  | 2.94%          | 0.02779         | 0.01055        | 0.02972            | 3.59%             | 1.36%            | 3.84%                | 2.8184 | 0.01247               | 4.16%        |
| 130.01      | 1                       |                                 | 0.77800 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 130.02      | 3                       | 3                               | 0.78933 | 0.07036 | 0.78933                      | 0.07036                 | 0.02872                  | 8.91%          | 0.06995         | 0.01066        | 0.07076            | 8.86%             | 1.35%            | 8.96%                | 6.6360 | 0.01227               | 4.14%        |
| 130.05      | 6                       | 6                               | 0.80400 | 0.04647 | 0.79810                      | 0.04246                 | 0.01226                  | 5.32%          | 0.04490         | 0.01696        | 0.04799            | 5.58%             | 2.11%            | 5.97%                | 2.8304 | 0.01700               | 4.14%        |
| 131.00      | 16                      | 15                              | 0.28364 | 0.01668 | 0.28403                      | 0.01741                 | 0.00308                  | 6.13%          | 0.01626         | 0.00529        | 0.01710            | 5.73%             | 1.86%            | 6.03%                | 3.2346 | 0.00691               | 4.83%        |
| 131.01      | 1                       |                                 | 0.25850 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 131.02      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 131.05      | 4                       | 4                               | 0.25350 | 0.07356 | 0.25350                      | 0.07356                 | 0.02601                  | 29.02%         | 0.07353         | 0.00287        | 0.07359            | 29.01%            | 1.13%            | 29.03%               | 25.619 | 0.00300               | 4.92%        |
| 132.00      | 16                      | 16                              | 0.84998 | 0.03348 | 0.84290                      | 0.02236                 | 0.00395                  | 2.65%          | 0.03264         | 0.01057        | 0.03430            | 3.84%             | 1.24%            | 4.04%                | 3.2459 | 0.01243               | 4.10%        |
| 132.01      | 1                       |                                 | 0.81550 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 132.02      | 3                       | 3                               | 0.84032 | 0.01824 | 0.84032                      | 0.01824                 | 0.00745                  | 2.17%          | 0.01553         | 0.01354        | 0.02060            | 1.85%             | 1.61%            | 2.45%                | 1.5213 | 0.01577               | 4.11%        |
| 132.05      | 5                       | 4                               | 0.82138 | 0.02969 | 0.82900                      | 0.03085                 | 0.00976                  | 3.72%          | 0.02772         | 0.01504        | 0.03154            | 3.38%             | 1.83%            | 3.84%                | 2.0973 | 0.04800               | 4.11%        |
| 133.00      | 17                      | 17                              | 1.0027  | 0.07770 | 0.99509                      | 0.05380                 | 0.00923                  | 5.41%          | 0.07541         | 0.02645        | 0.07992            | 7.52%             | 2.64%            | 7.97%                | 3.0214 | 0.02720               | 4.00%        |
| 133.05      | 5                       | 4                               | 0.98263 | 0.00642 | 0.99210                      | 0.02190                 | 0.00693                  | 2.21%          |                 | 0.02196        |                    |                   | 2.23%            |                      |        | 0.02380               | 4.00%        |
| 133.99      | 1                       |                                 | 1.1100  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 134.00      | 16                      | 13                              | 0.82858 | 0.02915 | 0.82012                      | 0.00963                 | 0.00176                  | 1.17%          | 0.02797         | 0.01161        | 0.03028            | 3.38%             | 1.40%            | 3.65%                | 2.6090 | 0.01431               | 4.12%        |
| 134.01      | 1                       |                                 | 0.82900 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 134.02      | 3                       | 3                               | 0.81972 | 0.07057 | 0.81972                      | 0.07057                 | 0.02881                  | 8.61%          | 0.06988         | 0.01393        | 0.07126            | 8.53%             | 1.70%            | 8.69%                | 5.1145 | 0.01710               | 4.12%        |
| 134.05      | 5                       | 4                               | 0.81550 | 0.02645 | 0.82460                      | 0.03064                 | 0.00969                  | 3.72%          | 0.02547         | 0.01010        | 0.02740            | 3.12%             | 1.24%            | 3.36%                | 2.7128 | 0.02480               | 4.12%        |
| 135.00      | 16                      | 14                              | 0.63300 | 0.01554 | 0.63474                      | 0.01745                 | 0.00319                  | 2.75%          | 0.01434         | 0.00844        | 0.01664            | 2.27%             | 1.33%            | 2.63%                | 1.9710 | 0.01166               | 4.28%        |
| 135.01      | 1                       |                                 | 0.62900 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 135.02      | 3                       | 3                               | 0.63367 | 0.02154 | 0.63367                      | 0.02154                 | 0.00879                  | 3.40%          | 0.02016         | 0.01075        | 0.02284            | 3.18%             | 1.70%            | 3.60%                | 2.1256 | 0.01300               | 4.28%        |
| 135.05      | 5                       | 4                               | 0.59913 | 0.06227 | 0.61220                      | 0.06134                 | 0.01940                  | 10.02%         | 0.06211         | 0.00641        | 0.06244            | 10.37%            | 1.07%            | 10.42%               | 9.7361 | 0.02080               | 4.31%        |
| 136.00      | 5                       | 5                               | 0.22977 | 0.02289 | 0.22977                      | 0.02289                 | 0.00724                  | 9.96%          | 0.02268         | 0.00447        | 0.02311            | 9.87%             | 1.94%            | 10.06%               | 5.1756 | 0.00498               | 4.99%        |
| 136.01      | 6                       | 4                               | 0.23025 | 0.00330 | 0.22500                      | 0.01208                 | 0.00382                  | 5.37%          | 0.00327         | 0.00071        | 0.00334            | 1.42%             | 0.31%            | 1.45%                | 4.7258 | 0.00080               | 5.01%        |
| 136.02      | 1                       |                                 | 0.20500 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 136.03      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 136.05      | 1                       |                                 | 0.17150 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 136.99      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 137.00      | 12                      | 12                              | 0.52507 | 0.04760 | 0.52166                      | 0.04566                 | 0.00932                  | 8.75%          | 0.04589         | 0.01790        | 0.04925            | 8.74%             | 3.41%            | 9.38%                | 2.7516 | 0.02028               | 4.41%        |
| 137.01      | 1                       |                                 | 0.52900 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 137.02      | 3                       | 3                               | 0.50843 | 0.03781 | 0.50843                      | 0.03781                 | 0.01544                  | 7.44%          | 0.03766         | 0.00481        | 0.03796            | 7.41%             | 0.95%            | 7.47%                | 7.8863 | 0.00627               | 4.43%        |
| 137.05      | 5                       | 4                               | 0.48275 | 0.09770 | 0.46630                      | 0.09226                 | 0.02918                  | 19.79%         | 0.09744         | 0.01011        | 0.09796            | 20.18%            | 2.09%            | 20.29%               | 9.6878 | 0.03580               | 4.49%        |
| 138.00      | 17                      | 16                              | 0.83685 | 0.04295 | 0.84448                      | 0.04241                 | 0.00727                  | 5.02%          | 0.03933         | 0.02441        | 0.04629            | 4.70%             | 2.92%            | 5.53%                | 1.8965 | 0.02760               | 4.10%        |
| 138.01      | 1                       |                                 | 0.83450 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 138.02      | 3                       | 3                               | 0.82797 | 0.09290 | 0.82797                      | 0.09290                 | 0.03793                  | 11.22%         | 0.09272         | 0.00813        | 0.09308            | 11.20%            | 0.98%            | 11.24%               | 11.445 | 0.00993               | 4.11%        |



| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean    | SD      | Assigned Value - Robust Mean | AAFCO CS fp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr  | Average Range (R-bar) | Horwitz %RSD |
|-------------|-------------------------|---------------------------------|---------|---------|------------------------------|-------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|--------|-----------------------|--------------|
| 138.05      | 5                       | 4                               | 0.85513 | 0.01893 | 0.86580                      | 0.02896                 | 0.00916                  | 3.34%          |                 | 0.02888        |                    |                   | 3.38%            |                      |        | 0.07920               | 4.09%        |
| 139.00      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 139.02      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 139.05      | 1                       |                                 | 0.00300 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 160.99      | 4                       | 4                               | 0.29525 | 0.08542 | 0.29525                      | 0.08542                 | 0.03020                  | 28.93%         | 0.08391         | 0.02259        | 0.08690            | 28.42%            | 7.65%            | 29.43%               | 3.8463 | 0.02050               | 4.81%        |
| 161.99      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 162.99      | 5                       | 3                               | 0.38550 | 0.02511 | 0.51930                      | 0.27034                 | 0.08549                  | 52.06%         | 0.02511         | 0.00041        | 0.02512            | 6.51%             | 0.11%            | 6.52%                | 61.522 | 0.01620               | 4.41%        |
| 163.99      | 3                       | 0                               |         |         | 0.00000                      | 0.00000                 | 0.00000                  |                |                 |                |                    |                   |                  |                      |        | 0.00000               | #DIV/0!      |
| 164.99      | 3                       | 2                               | 0.05000 | 0.07071 | 0.17700                      | 0.22558                 | 0.09209                  | 127.45%        | 0.07071         | 0.00000        | 0.07071            | 141.42%           | 0.00%            | 141.42%              |        | 0.00133               | 5.19%        |
| 165.99      | 5                       | 3                               | 1.8628  | 0.05193 | 1.7577                       | 0.20512                 | 0.06486                  | 11.67%         | 0.04555         | 0.03526        | 0.05760            | 2.45%             | 1.89%            | 3.09%                | 1.6336 | 0.06220               | 3.67%        |
| 166.99      | 1                       |                                 | 0.85400 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 167.99      | 1                       |                                 | 0.60000 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 400.01      | 4                       | 3                               | 0.65233 | 0.01181 | 0.65550                      | 0.01154                 | 0.00408                  | 1.76%          | 0.01179         | 0.00100        | 0.01184            | 1.81%             | 0.15%            | 1.81%                | 11.836 | 0.00350               |              |
| 516.00      | 3                       | 3                               | 0.13400 | 0.03439 | 0.13400                      | 0.03439                 | 0.01404                  | 25.67%         | 0.03316         | 0.01291        | 0.03559            | 24.75%            | 9.63%            | 26.56%               | 2.7564 | 0.01333               | 21.65%       |
| 516.52      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 516.53      | 5                       | 5                               | 0.15300 | 0.01267 | 0.15300                      | 0.01267                 | 0.00401                  | 8.28%          | 0.00793         | 0.01397        | 0.01607            | 5.18%             | 9.13%            | 10.50%               | 1.1499 | 0.01760               | 21.22%       |
| 518.34      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 518.41      | 4                       | 4                               | 0.07606 | 0.02590 | 0.07606                      | 0.02590                 | 0.00916                  | 34.05%         | 0.02557         | 0.00577        | 0.02622            | 33.62%            | 7.58%            | 34.47%               | 4.5444 | 0.00788               | 23.57%       |
| 518.52      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 518.53      | 5                       | 5                               | 0.09321 | 0.00759 | 0.09321                      | 0.00759                 | 0.00240                  | 8.14%          | 0.00582         | 0.00689        | 0.00902            | 6.25%             | 7.39%            | 9.68%                | 1.3092 | 0.00782               | 22.86%       |
| 520.41      | 3                       | 3                               | 2.7634  | 0.60770 | 2.7634                       | 0.60770                 | 0.24809                  | 21.99%         | 0.51538         | 0.45539        | 0.68774            | 18.65%            | 16.48%           | 24.89%               | 1.5102 | 0.49950               | 13.73%       |
| 520.43      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 520.52      | 1                       |                                 | 3.4550  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 520.53      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 520.99      | 1                       |                                 | 4.3400  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 526.31      | 1                       |                                 | 0.00100 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 526.33      | 1                       |                                 | 0.10800 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 526.34      | 1                       |                                 | 0.19450 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 526.41      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 526.52      | 2                       | 0                               |         |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 526.53      | 6                       | 5                               | 0.11930 | 0.01095 | 0.12220                      | 0.01273                 | 0.00367                  | 10.42%         | 0.01045         | 0.00462        | 0.01143            | 8.76%             | 3.87%            | 9.58%                | 2.4762 | 0.00950               | 21.95%       |
| 529.99      | 6                       | 4                               | 0.00925 | 0.01719 | 0.48740                      | 1.0693                  | 0.33814                  | 219.38%        | 0.01719         | 0.00000        | 0.01719            | 185.87%           | 0.00%            | 185.87%              |        | 0.08000               | 50.41%       |
| 539.31      | 1                       |                                 | 2.8650  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 539.41      | 1                       |                                 | 3.0000  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 539.43      | 1                       |                                 | 0.00000 |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 539.52      | 1                       |                                 | 2.3100  |         |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        |                       |              |
| 539.53      | 3                       | 3                               | 2.8562  | 0.72159 | 2.8562                       | 0.72159                 | 0.29459                  | 25.26%         | 0.66644         | 0.39128        | 0.77282            | 23.33%            | 13.70%           | 27.06%               | 1.9751 | 0.48233               | 13.66%       |
| 600.01      | 8                       | 7                               | 1.4229  | 1.8407  |                              |                         |                          |                |                 |                |                    |                   |                  |                      |        | 0.03143               |              |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean    | SD     | Assigned Value - Robust Mean | AAFCCO CS ffp - Robust sd | Uncertainty (U) - Robust | % RSD - Robust | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %/rsd | Reproducibility %RSD | sR/sr | Average Range (R-bar) | Horwitz %RSD |
|-------------|-------------------------|---------------------------------|---------|--------|------------------------------|---------------------------|--------------------------|----------------|-----------------|----------------|--------------------|-------------------|-------------------|----------------------|-------|-----------------------|--------------|
| 600.02      | 1                       |                                 | 300.00  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 600.03      | 1                       |                                 | 4.0000  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 600.08      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 600.13      | 1                       |                                 | 4.3415  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 600.14      | 1                       |                                 | 1.0000  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 600.20      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 601.23      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 602.23      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 603.23      | 1                       |                                 | 0.00000 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 604.23      | 1                       |                                 | 0.00000 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 610.01      | 4                       | 4                               | 537.50  | 103.08 |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       | 125.00                |              |
| 610.05      | 1                       |                                 | 650.00  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 610.07      | 1                       |                                 | 665.00  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 610.08      | 1                       |                                 | 0.00060 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 610.23      | 3                       | 1                               | 0.00000 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       | 0.04000               |              |
| 610.25      | 1                       |                                 | 385.00  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 620.01      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 620.04      | 1                       |                                 | 2,800.0 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 620.07      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 620.08      | 1                       |                                 | 328.00  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 620.09      | 1                       |                                 | 0.00040 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 620.23      | 1                       |                                 | 214.19  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 621.23      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 622.23      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 630.01      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 630.03      | 1                       |                                 | 0.10000 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 630.05      | 1                       |                                 | 5.0000  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 630.20      | 1                       |                                 | 0.00000 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 630.23      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 640.01      | 1                       |                                 | 109.00  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 640.03      | 1                       |                                 | 47.100  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 640.05      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 640.23      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 640.25      | 1                       |                                 | 0.00000 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 650.01      | 2                       | 0                               |         |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 650.04      | 1                       |                                 | 0.00000 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 650.07      | 1                       |                                 | 54.350  |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |
| 650.21      | 1                       |                                 | 0.00000 |        |                              |                           |                          |                |                 |                |                    |                   |                   |                      |       |                       |              |

|                                 |        |
|---------------------------------|--------|
| Horwitz %RSD                    |        |
| Average Range (R-bar)           |        |
| sR/sr                           |        |
| Reproducibility %RSD            |        |
| Within Labs %/rsd               |        |
| Between Labs %RSD               |        |
| Reproducibility sR              |        |
| Within Labs sr                  |        |
| Between Labs sL                 |        |
| % RSD - Robust                  |        |
| Uncertainty (U) - Robust        |        |
| AAFCO CS ffp - Robust sd        |        |
| Assigned Value - Robust Mean    |        |
| SD                              |        |
| Mean                            |        |
| # Labs Included in Calculations | 0      |
| Total # Labs Submitting         | 2      |
| Method Code                     | 650.24 |