

# AAFCO Check Sample Program

Methods Report

Sort by Method

Proficiency For Individual Methods

Sample # 201021

Sheep & Goat Feed, Medicated



# AAFCO

Association of American Feed Control Officials

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean    | SD      | Assigned Value - Robust Mean | AAFCO CS fip - Robust SD | Uncertainty (U) | % RSD  | Between Labs sL | Within Labs sI | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr   | Average Range (R-bar) |
|-------------|-------------------------|---------------------------------|---------|---------|------------------------------|--------------------------|-----------------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|---------|-----------------------|
| 000.01      | 1                       |                                 | 1.4000  |         |                              |                          |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 001.00      | 14                      | 10                              | 9.9148  | 0.5908  | 10.0258                      | 0.3735                   | 0.0835          | 3.73%  | 0.5877          | 0.0855         | 0.5939             | 5.93%             | 0.86%            | 5.99%                | 6.9439  | 0.0722                |
| 001.03      | 5                       | 5                               | 9.7340  | 0.5850  | 9.7340                       | 0.5850                   | 0.1850          | 6.01%  | 0.5822          | 0.0806         | 0.5878             | 5.98%             | 0.83%            | 6.04%                | 7.2906  | 0.0960                |
| 001.05      | 1                       |                                 | 9.9050  |         |                              |                          |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 001.07      | 32                      | 31                              | 9.7559  | 0.5045  | 9.8255                       | 0.2725                   | 0.0346          | 2.77%  | 0.4969          | 0.1232         | 0.5119             | 5.09%             | 1.26%            | 5.25%                | 4.1566  | 0.1072                |
| 001.08      | 2                       | 2                               | 10.1875 | 0.3712  |                              |                          |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 001.99      | 16                      | 14                              | 9.6210  | 1.1197  | 9.9271                       | 0.4099                   | 0.0775          | 4.13%  | 1.1177          | 0.0932         | 1.1216             | 11.62%            | 0.97%            | 11.66%               | 12.0309 | 0.1115                |
| 002.00      | 6                       | 6                               | 15.5533 | 0.3175  | 15.5552                      | 0.3569                   | 0.1030          | 2.29%  | 0.3026          | 0.1359         | 0.3317             | 1.95%             | 0.87%            | 2.13%                | 2.4411  | 0.1500                |
| 002.01      | 10                      | 10                              | 15.2919 | 0.2440  | 15.3587                      | 0.0937                   | 0.0210          | 0.61%  | 0.2395          | 0.0663         | 0.2485             | 1.57%             | 0.43%            | 1.63%                | 3.7473  | 0.0572                |
| 002.02      | 7                       | 7                               | 15.1816 | 0.2498  | 15.1816                      | 0.2832                   | 0.0757          | 1.87%  | 0.2451          | 0.0678         | 0.2543             | 1.61%             | 0.45%            | 1.68%                | 3.7498  | 0.0835                |
| 002.03      | 1                       |                                 | 15.3800 |         |                              |                          |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 002.04      | 7                       | 7                               | 15.4886 | 0.6577  | 15.4955                      | 0.4803                   | 0.1284          | 3.10%  | 0.6491          | 0.1501         | 0.6662             | 4.19%             | 0.97%            | 4.30%                | 4.4374  | 0.1914                |
| 002.05      | 18                      | 18                              | 15.4406 | 0.4152  | 15.3704                      | 0.2910                   | 0.0485          | 1.89%  | 0.4096          | 0.0957         | 0.4206             | 2.65%             | 0.62%            | 2.72%                | 4.3961  | 0.0942                |
| 002.06      | 197                     | 123                             | 15.6056 | 0.3387  | 15.6029                      | 0.2868                   | 0.0183          | 1.84%  | 0.3279          | 0.1197         | 0.3491             | 2.10%             | 0.77%            | 2.24%                | 2.9168  | 0.1192                |
| 002.08      | 3                       | 3                               | 15.1663 | 0.2891  | 15.1663                      | 0.2891                   | 0.1180          | 1.91%  | 0.2743          | 0.1288         | 0.3031             | 1.81%             | 0.85%            | 2.00%                | 2.3527  | 0.1425                |
| 002.10      | 7                       | 7                               | 19.1465 | 10.0506 | 15.3865                      | 0.2010                   | 0.0537          | 1.31%  | 10.0448         | 0.4803         | 10.0563            | 52.46%            | 2.51%            | 52.52%               | 20.9387 | 0.4189                |
| 002.11      | 8                       | 8                               | 15.4238 | 0.6336  | 15.4423                      | 0.5491                   | 0.1373          | 3.56%  | 0.6308          | 0.0848         | 0.6365             | 4.09%             | 0.55%            | 4.13%                | 7.5074  | 0.0975                |
| 002.99      | 3                       | 3                               | 15.5750 | 0.2468  | 15.5750                      | 0.2468                   | 0.1008          | 1.58%  | 0.2398          | 0.0826         | 0.2536             | 1.54%             | 0.53%            | 1.63%                | 3.0721  | 0.0967                |
| 003.00      | 19                      | 17                              | 3.7620  | 0.3450  | 3.7669                       | 0.3542                   | 0.0607          | 9.40%  | 0.3418          | 0.0663         | 0.3481             | 9.08%             | 1.76%            | 9.25%                | 5.2479  | 0.0661                |
| 003.01      | 1                       |                                 | 3.5500  |         |                              |                          |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 003.06      | 16                      | 15                              | 3.5223  | 0.1748  | 3.5247                       | 0.1136                   | 0.0207          | 3.22%  | 0.1416          | 0.1447         | 0.2025             | 4.02%             | 4.11%            | 5.75%                | 1.3992  | 0.1140                |
| 003.09      | 30                      | 29                              | 3.6337  | 0.2440  | 3.5982                       | 0.1935                   | 0.0254          | 5.38%  | 0.2393          | 0.0673         | 0.2486             | 6.59%             | 1.85%            | 6.84%                | 3.6962  | 0.0675                |
| 003.10      | 32                      | 31                              | 3.2556  | 0.2423  | 3.2998                       | 0.1211                   | 0.0154          | 3.67%  | 0.2376          | 0.0671         | 0.2469             | 7.30%             | 2.06%            | 7.58%                | 3.6789  | 0.0701                |
| 003.11      | 9                       | 9                               | 3.5850  | 0.2930  | 3.6081                       | 0.1583                   | 0.0373          | 4.39%  | 0.2922          | 0.0299         | 0.2937             | 8.15%             | 0.83%            | 8.19%                | 9.8218  | 0.0300                |
| 003.13      | 7                       | 6                               | 3.3931  | 0.3617  | 3.3614                       | 0.2691                   | 0.0777          | 8.01%  | 0.3564          | 0.0872         | 0.3669             | 10.50%            | 2.57%            | 10.81%               | 4.2083  | 0.0662                |
| 003.14      | 20                      | 20                              | 3.4687  | 0.1604  | 3.4518                       | 0.1455                   | 0.0230          | 4.22%  | 0.1441          | 0.0994         | 0.1751             | 4.16%             | 2.87%            | 5.05%                | 1.7611  | 0.1055                |
| 003.99      | 14                      | 10                              | 3.4795  | 0.4866  | 3.4592                       | 0.5053                   | 0.1130          | 14.61% | 0.4862          | 0.0287         | 0.4871             | 13.97%            | 0.83%            | 14.00%               | 16.9572 | 0.0370                |
| 004.00      | 27                      | 26                              | 13.8874 | 0.8586  | 13.9187                      | 0.6481                   | 0.0899          | 4.66%  | 0.8505          | 0.1664         | 0.8666             | 6.12%             | 1.20%            | 6.24%                | 5.2066  | 0.1617                |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean    | SD      | Assigned Value - Robust Mean | AAFCCO CS ffp - Robust sd | Uncertainty (U) | % RSD  | Between Labs sL | Within Labs sR | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr   | Average Range (R-bar) |
|-------------|-------------------------|---------------------------------|---------|---------|------------------------------|---------------------------|-----------------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|---------|-----------------------|
| 004.01      | 2                       | 2                               | 14.5250 | 0.5303  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 004.03      | 3                       | 3                               | 15.6567 | 1.6330  | 15.6567                      | 1.6330                    | 0.6667          | 10.43% | 1.6177          | 0.3161         | 1.6483             | 10.33%            | 2.02%            | 10.53%               | 5.2149  | 0.3933                |
| 004.06      | 30                      | 30                              | 14.1896 | 2.0428  | 14.3716                      | 0.8395                    | 0.1084          | 5.84%  | 2.0347          | 0.2571         | 2.0509             | 14.34%            | 1.81%            | 14.45%               | 7.9780  | 0.2455                |
| 004.07      | 42                      | 41                              | 13.8011 | 1.5786  | 13.8669                      | 0.8474                    | 0.0936          | 6.11%  | 1.5719          | 0.2053         | 1.5852             | 11.39%            | 1.49%            | 11.49%               | 7.7230  | 0.1831                |
| 004.11      | 9                       | 8                               | 13.2013 | 0.6092  | 13.2013                      | 0.6909                    | 0.1727          | 5.23%  | 0.6052          | 0.0991         | 0.6132             | 4.58%             | 0.75%            | 4.65%                | 6.1908  | 0.1075                |
| 004.99      | 1                       |                                 | 13.8150 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 005.00      | 178                     | 113                             | 7.2209  | 0.2531  | 7.2454                       | 0.1954                    | 0.0130          | 2.70%  | 0.2488          | 0.0655         | 0.2573             | 3.45%             | 0.91%            | 3.56%                | 3.9287  | 0.0645                |
| 005.02      | 1                       |                                 | 7.3500  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 005.05      | 7                       | 7                               | 7.3373  | 0.3314  | 7.4896                       | 0.1129                    | 0.0302          | 1.51%  | 0.3295          | 0.0498         | 0.3333             | 4.49%             | 0.68%            | 4.54%                | 6.6938  | 0.0569                |
| 005.11      | 5                       | 5                               | 7.7090  | 0.3752  | 7.7090                       | 0.3752                    | 0.1186          | 4.87%  | 0.3740          | 0.0425         | 0.3764             | 4.85%             | 0.55%            | 4.88%                | 8.8468  | 0.0500                |
| 005.99      | 12                      | 12                              | 7.3563  | 0.2690  | 7.3874                       | 0.2032                    | 0.0415          | 2.75%  | 0.2619          | 0.0864         | 0.2758             | 3.56%             | 1.17%            | 3.75%                | 3.1913  | 0.1058                |
| 008.02      | 14                      | 14                              | 17.7936 | 1.4371  | 18.0061                      | 1.0252                    | 0.1937          | 5.69%  | 1.4285          | 0.2222         | 1.4456             | 8.03%             | 1.25%            | 8.12%                | 6.5052  | 0.2471                |
| 008.05      | 1                       |                                 | 18.4500 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 008.08      | 22                      | 22                              | 17.1136 | 1.5728  | 17.4203                      | 0.8088                    | 0.1219          | 4.64%  | 1.5540          | 0.3429         | 1.5914             | 9.08%             | 2.00%            | 9.30%                | 4.6413  | 0.3818                |
| 008.99      | 1                       |                                 | 17.9000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 009.07      | 10                      | 10                              | 36.5315 | 0.6565  | 36.5315                      | 0.7444                    | 0.1665          | 2.04%  | 0.5730          | 0.4529         | 0.7304             | 1.57%             | 1.24%            | 2.00%                | 1.6128  | 0.5170                |
| 009.09      | 18                      | 17                              | 34.0550 | 3.6355  | 35.0013                      | 0.7852                    | 0.1347          | 2.24%  | 3.6262          | 0.3691         | 3.6449             | 10.65%            | 1.08%            | 10.70%               | 9.8754  | 0.3724                |
| 009.99      | 4                       | 4                               | 37.4413 | 1.6482  | 37.4413                      | 1.6482                    | 0.5827          | 4.40%  | 1.6151          | 0.4652         | 1.6807             | 4.31%             | 1.24%            | 4.49%                | 3.6129  | 0.5875                |
| 010.03      | 4                       | 4                               | 8.2093  | 1.0670  | 8.2093                       | 1.0670                    | 0.3772          | 13.00% | 1.0129          | 0.4742         | 1.1184             | 12.34%            | 5.78%            | 13.62%               | 2.3586  | 0.5392                |
| 010.11      | 7                       | 7                               | 9.7542  | 0.5945  | 9.8336                       | 0.4332                    | 0.1158          | 4.41%  | 0.5845          | 0.1535         | 0.6043             | 5.99%             | 1.57%            | 6.20%                | 3.9360  | 0.1744                |
| 010.99      | 11                      | 10                              | 9.9464  | 0.6134  | 9.9215                       | 0.5644                    | 0.1262          | 5.69%  | 0.6105          | 0.0838         | 0.6163             | 6.14%             | 0.84%            | 6.20%                | 7.3575  | 0.0805                |
| 011.01      | 143                     | 74                              | 10.9166 | 0.4971  | 10.9558                      | 0.3709                    | 0.0305          | 3.39%  | 0.4908          | 0.1119         | 0.5033             | 4.50%             | 1.02%            | 4.61%                | 4.4999  | 0.1112                |
| 011.02      | 1                       |                                 | 10.5350 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 011.99      | 3                       | 3                               | 9.7150  | 1.8667  | 9.7150                       | 1.8667                    | 0.7621          | 19.21% | 1.8651          | 0.1108         | 1.8684             | 19.20%            | 1.14%            | 19.23%               | 16.8580 | 0.1500                |
| 012.00      | 5                       | 5                               | 16.6780 | 0.7856  | 16.6780                      | 0.7856                    | 0.2484          | 4.71%  | 0.6568          | 0.6095         | 0.8960             | 3.94%             | 3.65%            | 5.37%                | 1.4702  | 0.5760                |
| 012.01      | 3                       | 3                               | 13.7983 | 0.6485  | 13.7983                      | 0.6485                    | 0.2648          | 4.70%  | 0.3609          | 0.7620         | 0.8431             | 2.62%             | 5.52%            | 6.11%                | 1.1065  | 0.7833                |
| 012.02      | 1                       |                                 | 17.6854 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 012.03      | 1                       |                                 | 14.7000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 012.04      | 6                       | 6                               | 13.2567 | 4.0225  | 14.0575                      | 2.2022                    | 0.6357          | 15.67% | 4.0210          | 0.1558         | 4.0240             | 30.33%            | 1.18%            | 30.35%               | 25.8230 | 0.1700                |
| 012.11      | 3                       | 3                               | 18.7117 | 2.7054  | 18.7117                      | 2.7054                    | 1.1045          | 14.46% | 2.7037          | 0.1335         | 2.7070             | 14.45%            | 0.71%            | 14.47%               | 20.2806 | 0.1567                |
| 012.99      | 1                       |                                 | 37.0000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 013.00      | 3                       | 3                               | 4.3850  | 0.3228  | 4.3850                       | 0.3228                    | 0.1318          | 7.36%  | 0.2898          | 0.2010         | 0.3527             | 6.61%             | 4.58%            | 8.04%                | 1.7543  | 0.2167                |
| 013.02      | 92                      | 31                              | 4.8375  | 0.5559  | 4.8069                       | 0.4883                    | 0.0620          | 10.16% | 0.5479          | 0.1332         | 0.5638             | 11.33%            | 2.75%            | 11.66%               | 4.2325  | 0.1410                |
| 013.03      | 1                       |                                 | 2.8300  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 013.10      | 14                      | 13                              | 4.5211  | 0.6483  | 4.4430                       | 0.3552                    | 0.0697          | 7.99%  | 0.6345          | 0.1877         | 0.6617             | 14.03%            | 4.15%            | 14.64%               | 3.5257  | 0.2108                |
| 013.11      | 1                       |                                 | 3.1500  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 013.13      | 1                       |                                 | 4.7200  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 015.41      | 3                       | 3                               | 75.5517 | 32.0371 | 75.5517                      | 32.0371                   | 13.0791         | 42.40% | 25.0743         | 28.2012        | 37.7363            | 33.19%            | 37.33%           | 49.95%               | 1.3381  | 24.4530               |
| 015.42      | 2                       | 2                               | 62.7750 | 15.5917 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |

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|-------------|-------------------------|---------------------------------|---------|---------|------------------------------|---------------------------|-----------------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|---------|-----------------------|
| 015.43      | 4                       | 4                               | 57.8813 | 11.7785 | 57.8813                      | 11.7785                   | 4.1643          | 20.35% | 11.6090         | 2.8153         | 11.9455            | 20.06%            | 4.86%            | 20.64%               | 4.2431  | 3.2075                |
| 015.52      | 1                       |                                 | 73.5000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 016.00      | 1                       |                                 | 0.0375  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 017.41      | 1                       |                                 | 8.6550  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 017.42      | 3                       | 3                               | 8.4967  | 0.9829  | 8.4967                       | 0.9829                    | 0.4013          | 11.57% | 0.9661          | 0.2561         | 0.9994             | 11.37%            | 3.01%            | 11.76%               | 3.9031  | 0.3533                |
| 017.43      | 3                       | 3                               | 9.1800  | 1.4548  | 9.1800                       | 1.4548                    | 0.5939          | 15.85% | 1.4495          | 0.1758         | 1.4601             | 15.79%            | 1.91%            | 15.91%               | 8.3064  | 0.2000                |
| 018.41      | 1                       |                                 | 0.1125  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 018.42      | 2                       | 2                               | 0.1043  | 0.0060  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 019.00      | 14                      | 13                              | 1.1758  | 0.1669  | 1.1505                       | 0.0838                    | 0.0164          | 7.28%  | 0.1648          | 0.0375         | 0.1690             | 14.02%            | 3.19%            | 14.38%               | 4.5106  | 0.0358                |
| 019.01      | 2                       | 2                               | 1.1400  | 0.1980  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 019.02      | 1                       |                                 | 1.0050  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 019.03      | 5                       | 5                               | 1.2003  | 0.0356  | 1.2003                       | 0.0356                    | 0.0113          | 2.97%  | 0.0315          | 0.0235         | 0.0393             | 2.62%             | 1.96%            | 3.27%                | 1.6727  | 0.0227                |
| 019.06      | 1                       |                                 | 1.1350  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 019.08      | 6                       | 6                               | 1.1667  | 0.1164  | 1.1686                       | 0.1280                    | 0.0370          | 10.96% | 0.1160          | 0.0147         | 0.1169             | 9.94%             | 1.26%            | 10.02%               | 7.9416  | 0.0167                |
| 019.31      | 28                      | 27                              | 1.1583  | 0.0673  | 1.1655                       | 0.0335                    | 0.0046          | 2.87%  | 0.0648          | 0.0256         | 0.0697             | 5.59%             | 2.21%            | 6.01%                | 2.7185  | 0.0257                |
| 019.32      | 11                      | 11                              | 1.1643  | 0.0632  | 1.1769                       | 0.0329                    | 0.0070          | 2.80%  | 0.0624          | 0.0133         | 0.0638             | 5.36%             | 1.14%            | 5.48%                | 4.8077  | 0.0141                |
| 019.33      | 2                       | 2                               | 1.2075  | 0.0530  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 019.41      | 34                      | 34                              | 1.1499  | 0.0432  | 1.1549                       | 0.0336                    | 0.0041          | 2.91%  | 0.0368          | 0.0319         | 0.0487             | 3.20%             | 2.78%            | 4.24%                | 1.5267  | 0.0290                |
| 019.42      | 18                      | 18                              | 1.1720  | 0.0585  | 1.1783                       | 0.0515                    | 0.0086          | 4.37%  | 0.0563          | 0.0222         | 0.0606             | 4.81%             | 1.90%            | 5.17%                | 2.7250  | 0.0231                |
| 019.43      | 11                      | 11                              | 1.1577  | 0.0504  | 1.1553                       | 0.0519                    | 0.0111          | 4.49%  | 0.0424          | 0.0386         | 0.0573             | 3.66%             | 3.34%            | 4.95%                | 1.4841  | 0.0396                |
| 019.52      | 2                       | 2                               | 1.0513  | 0.1256  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 019.53      | 2                       | 2                               | 1.2338  | 0.0336  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 019.99      | 5                       | 5                               | 1.0631  | 0.1584  | 1.0631                       | 0.1584                    | 0.0501          | 14.90% | 0.1566          | 0.0337         | 0.1602             | 14.73%            | 3.17%            | 15.07%               | 4.7478  | 0.0336                |
| 020.31      | 1                       |                                 | 2.0000  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 020.32      | 1                       |                                 | 15.2767 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 020.41      | 2                       | 2                               | 1.5276  | 1.3826  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 020.42      | 4                       | 4                               | 3.1550  | 0.8041  | 3.1550                       | 0.8041                    | 0.2843          | 25.49% | 0.7614          | 0.3653         | 0.8445             | 24.13%            | 11.58%           | 26.77%               | 2.3120  | 0.3550                |
| 020.43      | 3                       | 3                               | 2.9103  | 1.2464  | 2.9103                       | 1.2464                    | 0.5088          | 42.83% | 1.2141          | 0.3990         | 1.2779             | 41.72%            | 13.71%           | 43.91%               | 3.2031  | 0.4816                |
| 020.52      | 1                       |                                 | 3.7500  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 020.99      | 2                       | 2                               | 2.6550  | 0.9899  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 021.31      | 3                       | 3                               | 1.6767  | 0.7407  | 1.6767                       | 0.7407                    | 0.3024          | 44.18% | 0.7384          | 0.0816         | 0.7429             | 44.04%            | 4.87%            | 44.31%               | 9.0992  | 0.0667                |
| 021.32      | 1                       |                                 | 2.6812  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 021.33      | 1                       |                                 | 0.9770  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 021.41      | 5                       | 5                               | 0.8164  | 0.6254  | 0.8164                       | 0.6254                    | 0.1978          | 76.60% | 0.6253          | 0.0122         | 0.6254             | 76.60%            | 1.50%            | 76.61%               | 51.1971 | 0.0123                |
| 021.42      | 5                       | 5                               | 1.1430  | 0.2712  | 1.1430                       | 0.2712                    | 0.0858          | 23.73% | 0.2625          | 0.0967         | 0.2797             | 22.96%            | 8.46%            | 24.47%               | 2.8926  | 0.1140                |
| 021.43      | 4                       | 4                               | 1.4651  | 0.5545  | 1.4651                       | 0.5545                    | 0.1960          | 37.84% | 0.5493          | 0.1064         | 0.5595             | 37.49%            | 7.26%            | 38.19%               | 5.2571  | 0.1363                |
| 021.52      | 1                       |                                 | 1.4500  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 021.99      | 1                       |                                 | 2.1500  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 022.04      | 1                       |                                 | 21.0000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean     | SD      | Assigned Value - Robust Mean | AAFCCO CS ffp - Robust sd | Uncertainty (U) | % RSD  | Between Labs sL | Within Labs sR | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr    | Average Range (R-bar) |
|-------------|-------------------------|---------------------------------|----------|---------|------------------------------|---------------------------|-----------------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|----------|-----------------------|
| 022.31      | 17                      | 16                              | 20.7278  | 1.4241  | 20.5463                      | 1.3127                    | 0.2321          | 6.39%  | 1.2048          | 1.0737         | 1.6138             | 5.81%             | 5.18%            | 7.79%                | 1.5030   | 0.9369                |
| 022.32      | 4                       | 4                               | 23.9504  | 5.0961  | 23.9504                      | 5.0961                    | 1.8018          | 21.28% | 4.8564          | 2.1846         | 5.3251             | 20.28%            | 9.12%            | 22.23%               | 2.4376   | 2.0582                |
| 022.33      | 1                       |                                 | 20.0500  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 022.41      | 25                      | 24                              | 20.4898  | 1.7439  | 20.2159                      | 1.1196                    | 0.1616          | 5.54%  | 1.6228          | 0.9031         | 1.8571             | 7.92%             | 4.41%            | 9.06%                | 2.0564   | 0.8604                |
| 022.42      | 17                      | 17                              | 21.0609  | 2.0022  | 21.0168                      | 1.8902                    | 0.3242          | 8.99%  | 1.9085          | 0.8563         | 2.0918             | 9.06%             | 4.07%            | 9.93%                | 2.4427   | 0.9559                |
| 022.43      | 10                      | 9                               | 19.7177  | 2.0117  | 19.7816                      | 2.1471                    | 0.5061          | 10.85% | 1.8607          | 1.0812         | 2.1521             | 9.44%             | 5.48%            | 10.91%               | 1.9904   | 1.1132                |
| 022.52      | 1                       |                                 | 25.0000  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 022.53      | 2                       | 2                               | 23.3375  | 3.0229  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 022.99      | 2                       | 2                               | 20.3150  | 1.0112  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 023.01      | 1                       |                                 | 0.0000   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 025.04      | 1                       |                                 | 317.0000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 025.31      | 15                      | 15                              | 292.2337 | 88.2519 | 316.0869                     | 26.6596                   | 4.8673          | 8.43%  | 88.0923         | 7.5031         | 88.4113            | 30.14%            | 2.57%            | 30.25%               | 11.7833  | 7.4913                |
| 025.32      | 4                       | 4                               | 303.0611 | 47.7772 | 303.0611                     | 47.7772                   | 16.8918         | 15.76% | 43.8699         | 26.7617        | 51.3883            | 14.48%            | 8.83%            | 16.96%               | 1.9202   | 22.0742               |
| 025.33      | 1                       |                                 | 276.5000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 025.41      | 28                      | 27                              | 299.4833 | 26.4914 | 303.7160                     | 16.9919                   | 2.3123          | 5.59%  | 25.3130         | 11.0495        | 27.6196            | 8.45%             | 3.69%            | 9.22%                | 2.4996   | 9.6659                |
| 025.42      | 17                      | 17                              | 268.9870 | 76.8461 | 288.0866                     | 26.2588                   | 4.5033          | 9.11%  | 76.2748         | 13.2271        | 77.4132            | 28.36%            | 4.92%            | 28.78%               | 5.8526   | 13.8989               |
| 025.43      | 10                      | 10                              | 306.1440 | 33.6504 | 308.6536                     | 33.3933                   | 7.4670          | 10.82% | 32.2836         | 13.4250        | 34.9638            | 10.55%            | 4.39%            | 11.42%               | 2.6044   | 11.8195               |
| 025.52      | 1                       |                                 | 294.5000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 025.53      | 1                       |                                 | 334.3500 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 025.99      | 2                       | 2                               | 311.0000 | 18.3848 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 026.31      | 1                       |                                 | 0.4000   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 026.52      | 1                       |                                 | 0.1200   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 026.99      | 1                       |                                 | 0.0000   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 027.04      | 1                       |                                 | 0.3400   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 027.31      | 14                      | 14                              | 0.3379   | 0.0128  | 0.3379                       | 0.0137                    | 0.0026          | 4.06%  | 0.0118          | 0.0071         | 0.0137             | 3.48%             | 2.09%            | 4.06%                | 1.9449   | 0.0079                |
| 027.32      | 7                       | 6                               | 0.3309   | 0.0413  | 0.3407                       | 0.0219                    | 0.0063          | 6.42%  | 0.0413          | 0.0003         | 0.0413             | 12.47%            | 0.08%            | 12.47%               | 150.6684 | 0.0002                |
| 027.41      | 27                      | 26                              | 0.3542   | 0.0132  | 0.3532                       | 0.0130                    | 0.0018          | 3.67%  | 0.0120          | 0.0078         | 0.0143             | 3.40%             | 2.19%            | 4.05%                | 1.8471   | 0.0077                |
| 027.42      | 16                      | 16                              | 0.3386   | 0.0126  | 0.3382                       | 0.0133                    | 0.0024          | 3.94%  | 0.0115          | 0.0073         | 0.0136             | 3.40%             | 2.16%            | 4.02%                | 1.8662   | 0.0073                |
| 027.43      | 9                       | 8                               | 0.3420   | 0.0187  | 0.3409                       | 0.0190                    | 0.0048          | 5.58%  | 0.0180          | 0.0071         | 0.0194             | 5.27%             | 2.07%            | 5.66%                | 2.7327   | 0.0075                |
| 027.52      | 1                       |                                 | 0.3209   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 027.53      | 2                       | 2                               | 0.3565   | 0.0580  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 027.99      | 2                       | 2                               | 0.3408   | 0.0130  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 028.04      | 1                       |                                 | 137.0000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 028.31      | 18                      | 18                              | 138.7956 | 10.8113 | 139.0600                     | 7.9637                    | 1.3273          | 5.73%  | 10.0250         | 5.7240         | 11.5441            | 7.22%             | 4.12%            | 8.32%                | 2.0168   | 5.9800                |
| 028.32      | 5                       | 5                               | 143.2473 | 24.5688 | 143.2473                     | 24.5688                   | 7.7693          | 17.15% | 24.2356         | 5.7024         | 24.8974            | 16.92%            | 3.98%            | 17.38%               | 4.3662   | 5.4891                |
| 028.33      | 1                       |                                 | 91.9000  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 028.41      | 25                      | 25                              | 135.7671 | 24.3159 | 138.5712                     | 8.7402                    | 1.2360          | 6.31%  | 24.2404         | 2.7083         | 24.3912            | 17.85%            | 1.99%            | 17.97%               | 9.0060   | 3.0034                |
| 028.42      | 18                      | 18                              | 142.4747 | 6.5183  | 143.1139                     | 4.3860                    | 0.7310          | 3.06%  | 5.4242          | 5.1120         | 7.4535             | 3.81%             | 3.59%            | 5.23%                | 1.4580   | 5.5272                |
| 028.43      | 11                      | 10                              | 140.2776 | 14.8015 | 142.0546                     | 10.3451                   | 2.3132          | 7.28%  | 14.4698         | 4.4067         | 15.1259            | 10.32%            | 3.14%            | 10.78%               | 3.4325   | 4.6891                |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean     | SD     | Assigned Value - Robust Mean | AAFCCO CS ffp - Robust sd | Uncertainty (U) | % RSD  | Between Labs sL | Within Labs sR | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr   | Average Range (R-bar) |
|-------------|-------------------------|---------------------------------|----------|--------|------------------------------|---------------------------|-----------------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|---------|-----------------------|
| 028.52      | 1                       |                                 | 126.5000 |        |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 028.53      | 2                       | 2                               | 148.0500 | 4.3134 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 028.99      | 2                       | 2                               | 135.1775 | 4.4937 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 029.99      | 1                       |                                 | 0.0290   |        |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 031.00      | 3                       | 3                               | 0.6303   | 0.0771 | 0.6303                       | 0.0771                    | 0.0315          | 12.23% | 0.0667          | 0.0547         | 0.0862             | 10.58%            | 8.67%            | 13.68%               | 1.5780  | 0.0477                |
| 031.01      | 52                      | 50                              | 0.6813   | 0.0291 | 0.6833                       | 0.0220                    | 0.0022          | 3.21%  | 0.0281          | 0.0108         | 0.0301             | 4.13%             | 1.59%            | 4.42%                | 2.7861  | 0.0099                |
| 031.02      | 2                       | 2                               | 0.6821   | 0.0041 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 031.03      | 6                       | 6                               | 0.6886   | 0.0129 | 0.6891                       | 0.0137                    | 0.0039          | 1.98%  | 0.0119          | 0.0068         | 0.0137             | 1.73%             | 0.99%            | 1.99%                | 2.0140  | 0.0067                |
| 031.06      | 2                       | 2                               | 0.7450   | 0.0071 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 031.07      | 1                       |                                 | 0.6850   |        |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 031.41      | 30                      | 27                              | 0.6882   | 0.0326 | 0.6866                       | 0.0250                    | 0.0034          | 3.65%  | 0.0316          | 0.0110         | 0.0335             | 4.59%             | 1.60%            | 4.87%                | 3.0433  | 0.0114                |
| 031.42      | 18                      | 17                              | 0.6762   | 0.0377 | 0.6791                       | 0.0350                    | 0.0060          | 5.16%  | 0.0371          | 0.0092         | 0.0382             | 5.49%             | 1.36%            | 5.66%                | 4.1660  | 0.0095                |
| 031.43      | 11                      | 11                              | 0.6935   | 0.0419 | 0.6975                       | 0.0100                    | 0.0021          | 1.43%  | 0.0385          | 0.0232         | 0.0450             | 5.56%             | 3.34%            | 6.48%                | 1.9411  | 0.0231                |
| 031.52      | 1                       |                                 | 0.6122   |        |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 031.53      | 2                       | 2                               | 0.6625   | 0.0933 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 031.99      | 6                       | 6                               | 0.6588   | 0.0271 | 0.6588                       | 0.0307                    | 0.0089          | 4.66%  | 0.0259          | 0.0113         | 0.0283             | 3.93%             | 1.72%            | 4.29%                | 2.4971  | 0.0127                |
| 032.02      | 7                       | 6                               | 1.1943   | 0.0601 | 1.1943                       | 0.0681                    | 0.0197          | 5.70%  | 0.0570          | 0.0270         | 0.0630             | 4.77%             | 2.26%            | 5.28%                | 2.3380  | 0.0325                |
| 032.04      | 1                       |                                 | 1.1400   |        |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 032.06      | 1                       |                                 | 1.1550   |        |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 032.31      | 14                      | 13                              | 1.1872   | 0.0712 | 1.1908                       | 0.0569                    | 0.0112          | 4.78%  | 0.0709          | 0.0095         | 0.0715             | 5.97%             | 0.80%            | 6.03%                | 7.5223  | 0.0108                |
| 032.32      | 3                       | 3                               | 1.1817   | 0.0475 | 1.1817                       | 0.0475                    | 0.0194          | 4.02%  | 0.0467          | 0.0122         | 0.0483             | 3.95%             | 1.04%            | 4.09%                | 3.9441  | 0.0100                |
| 032.41      | 28                      | 28                              | 1.1144   | 0.1101 | 1.1344                       | 0.0539                    | 0.0072          | 4.75%  | 0.1084          | 0.0270         | 0.1117             | 9.73%             | 2.42%            | 10.03%               | 4.1464  | 0.0304                |
| 032.42      | 15                      | 14                              | 1.1704   | 0.0482 | 1.1675                       | 0.0475                    | 0.0090          | 4.07%  | 0.0460          | 0.0206         | 0.0504             | 3.93%             | 1.76%            | 4.31%                | 2.4435  | 0.0193                |
| 032.43      | 8                       | 8                               | 1.1597   | 0.0656 | 1.1537                       | 0.0350                    | 0.0087          | 3.03%  | 0.0479          | 0.0635         | 0.0795             | 4.13%             | 5.47%            | 6.86%                | 1.2526  | 0.0590                |
| 032.52      | 1                       |                                 | 1.1572   |        |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 032.53      | 2                       | 2                               | 1.2535   | 0.0021 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 032.99      | 3                       | 3                               | 1.1400   | 0.1136 | 1.1400                       | 0.1136                    | 0.0464          | 9.96%  | 0.1134          | 0.0085         | 0.1137             | 9.95%             | 0.75%            | 9.98%                | 13.3425 | 0.0087                |
| 033.00      | 25                      | 25                              | 1.2640   | 0.1115 | 1.2822                       | 0.0526                    | 0.0074          | 4.10%  | 0.1103          | 0.0231         | 0.1127             | 8.72%             | 1.83%            | 8.91%                | 4.8712  | 0.0235                |
| 033.01      | 28                      | 26                              | 1.3108   | 0.0633 | 1.3248                       | 0.0222                    | 0.0031          | 1.68%  | 0.0628          | 0.0109         | 0.0638             | 4.79%             | 0.83%            | 4.87%                | 5.8713  | 0.0099                |
| 033.03      | 8                       | 8                               | 1.1278   | 0.1460 | 1.1221                       | 0.0694                    | 0.0173          | 6.18%  | 0.1360          | 0.0749         | 0.1553             | 12.06%            | 6.64%            | 13.77%               | 2.0741  | 0.0811                |
| 033.05      | 1                       |                                 | 1.3100   |        |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 033.99      | 8                       | 8                               | 1.1350   | 0.2926 | 1.1454                       | 0.3121                    | 0.0780          | 27.25% | 0.2922          | 0.0218         | 0.2931             | 25.75%            | 1.92%            | 25.82%               | 13.4462 | 0.0250                |
| 034.01      | 3                       | 3                               | 0.5308   | 0.0153 | 0.5308                       | 0.0153                    | 0.0062          | 2.88%  | 0.0146          | 0.0065         | 0.0160             | 2.75%             | 1.23%            | 3.01%                | 2.4525  | 0.0075                |
| 034.04      | 7                       | 7                               | 0.6414   | 0.1718 | 0.6052                       | 0.1077                    | 0.0288          | 17.79% | 0.1715          | 0.0134         | 0.1720             | 26.74%            | 2.09%            | 26.82%               | 12.8465 | 0.0134                |
| 034.05      | 1                       |                                 | 0.4000   |        |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 034.41      | 3                       | 3                               | 0.6108   | 0.3992 | 0.6108                       | 0.3992                    | 0.1630          | 65.35% | 0.3991          | 0.0082         | 0.3992             | 65.34%            | 1.34%            | 65.36%               | 48.8346 | 0.0070                |
| 034.52      | 3                       | 3                               | 0.6025   | 0.0588 | 0.6025                       | 0.0588                    | 0.0240          | 9.76%  | 0.0318          | 0.0699         | 0.0768             | 5.28%             | 11.61%           | 12.75%               | 1.0985  | 0.0603                |
| 034.53      | 2                       | 2                               | 0.5395   | 0.0749 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 034.99      | 3                       | 3                               | 0.5124   | 0.0600 | 0.5124                       | 0.0600                    | 0.0245          | 11.71% | 0.0572          | 0.0256         | 0.0627             | 11.16%            | 4.99%            | 12.23%               | 2.4491  | 0.0284                |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean     | SD      | Assigned Value - Robust Mean | AAFCCO CS ffp - Robust sd | Uncertainty (U) | % RSD  | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr   | Average Range (R-bar) |
|-------------|-------------------------|---------------------------------|----------|---------|------------------------------|---------------------------|-----------------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|---------|-----------------------|
| 035.01      | 1                       |                                 | 0.3050   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 035.02      | 1                       |                                 | 0.2350   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 035.04      | 1                       |                                 | 0.2700   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 035.05      | 10                      | 9                               | 0.2429   | 0.0549  | 0.2626                       | 0.0204                    | 0.0048          | 7.78%  | 0.0547          | 0.0058         | 0.0551             | 22.54%            | 2.40%            | 22.67%               | 9.4265  | 0.0060                |
| 035.31      | 14                      | 13                              | 0.2789   | 0.0309  | 0.2744                       | 0.0202                    | 0.0040          | 7.37%  | 0.0305          | 0.0069         | 0.0313             | 10.95%            | 2.46%            | 11.22%               | 4.5701  | 0.0066                |
| 035.32      | 6                       | 6                               | 0.2971   | 0.0136  | 0.2971                       | 0.0154                    | 0.0044          | 5.19%  | 0.0131          | 0.0053         | 0.0141             | 4.40%             | 1.79%            | 4.75%                | 2.6477  | 0.0065                |
| 035.41      | 29                      | 28                              | 0.2715   | 0.0177  | 0.2700                       | 0.0154                    | 0.0021          | 5.70%  | 0.0159          | 0.0111         | 0.0193             | 5.84%             | 4.07%            | 7.12%                | 1.7487  | 0.0103                |
| 035.42      | 17                      | 17                              | 0.2725   | 0.0279  | 0.2649                       | 0.0159                    | 0.0027          | 5.99%  | 0.0268          | 0.0110         | 0.0290             | 9.84%             | 4.03%            | 10.64%               | 2.6383  | 0.0117                |
| 035.43      | 9                       | 9                               | 0.2719   | 0.0330  | 0.2648                       | 0.0148                    | 0.0035          | 5.57%  | 0.0316          | 0.0134         | 0.0343             | 11.62%            | 4.92%            | 12.62%               | 2.5637  | 0.0132                |
| 035.52      | 1                       |                                 | 0.2763   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 035.53      | 2                       | 2                               | 0.2898   | 0.0124  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 035.99      | 3                       | 3                               | 0.2947   | 0.0263  | 0.2947                       | 0.0263                    | 0.0107          | 8.91%  | 0.0241          | 0.0147         | 0.0282             | 8.18%             | 5.00%            | 9.59%                | 1.9185  | 0.0170                |
| 036.04      | 1                       |                                 | 0.2500   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 036.42      | 14                      | 14                              | 0.2359   | 0.0239  | 0.2365                       | 0.0227                    | 0.0043          | 9.59%  | 0.0233          | 0.0078         | 0.0245             | 9.86%             | 3.29%            | 10.39%               | 3.1558  | 0.0082                |
| 036.43      | 8                       | 8                               | 0.2399   | 0.0229  | 0.2396                       | 0.0238                    | 0.0059          | 9.92%  | 0.0225          | 0.0059         | 0.0232             | 9.37%             | 2.44%            | 9.68%                | 3.9714  | 0.0070                |
| 036.99      | 1                       |                                 | 0.3770   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 037.02      | 1                       |                                 | 233.0000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 037.31      | 19                      | 19                              | 235.0982 | 48.8528 | 240.8516                     | 17.4329                   | 2.8280          | 7.24%  | 48.6504         | 6.2823         | 49.0543            | 20.69%            | 2.67%            | 20.87%               | 7.8083  | 6.8468                |
| 037.32      | 4                       | 4                               | 246.7223 | 9.4220  | 246.7223                     | 9.4220                    | 3.3312          | 3.82%  | 8.1603          | 6.6609         | 10.5337            | 3.31%             | 2.70%            | 4.27%                | 1.5814  | 6.7429                |
| 037.33      | 1                       |                                 | 245.6500 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 037.41      | 26                      | 25                              | 237.5303 | 21.2351 | 234.6113                     | 17.1768                   | 2.4292          | 7.32%  | 20.9242         | 5.1202         | 21.5415            | 8.81%             | 2.16%            | 9.07%                | 4.2072  | 5.2170                |
| 037.42      | 17                      | 16                              | 233.3353 | 11.7274 | 234.1997                     | 11.2351                   | 1.9861          | 4.80%  | 11.2076         | 4.8832         | 12.2252            | 4.80%             | 2.09%            | 5.24%                | 2.5035  | 5.5706                |
| 037.43      | 12                      | 12                              | 238.6533 | 30.5382 | 233.7126                     | 23.7921                   | 4.8565          | 10.18% | 29.3417         | 11.9705        | 31.6896            | 12.29%            | 5.02%            | 13.28%               | 2.6473  | 12.4023               |
| 037.51      | 1                       |                                 | 236.0000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 037.52      | 1                       |                                 | 214.5000 |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 037.53      | 2                       | 2                               | 232.8500 | 19.5869 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 037.99      | 2                       | 2                               | 236.1950 | 5.3811  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 038.31      | 1                       |                                 | 1.8000   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 038.41      | 1                       |                                 | 1.1200   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 038.42      | 5                       | 5                               | 1.5220   | 0.3842  | 1.5220                       | 0.3842                    | 0.1215          | 25.25% | 0.3651          | 0.1693         | 0.4024             | 23.99%            | 11.12%           | 26.44%               | 2.3772  | 0.1720                |
| 038.43      | 4                       | 4                               | 1.3031   | 0.8841  | 1.3031                       | 0.8841                    | 0.3126          | 67.85% | 0.8834          | 0.0503         | 0.8848             | 67.79%            | 3.86%            | 67.90%               | 17.5883 | 0.0539                |
| 038.52      | 1                       |                                 | 1.4750   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 039.31      | 1                       |                                 | 1.9000   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 039.41      | 1                       |                                 | 2.3565   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 039.42      | 2                       | 2                               | 2.5250   | 0.1838  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 039.43      | 1                       |                                 | 2.3180   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 039.52      | 1                       |                                 | 2.8000   |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 040.42      | 1                       |                                 | 14.2500  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |
| 040.43      | 1                       |                                 | 13.4345  |         |                              |                           |                 |        |                 |                |                    |                   |                  |                      |         |                       |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean      | SD        | Assigned Value - Robust Mean | AAFCCO CS ffp - Robust sd | Uncertainty (U) | % RSD  | Between Labs sL | Within Labs sR | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr    | Average Range (R-bar) |
|-------------|-------------------------|---------------------------------|-----------|-----------|------------------------------|---------------------------|-----------------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|----------|-----------------------|
| 041.41      | 1                       |                                 | 0.1750    |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 054.01      | 10                      | 9                               | 5.7527    | 0.6265    | 5.7334                       | 0.5323                    | 0.1255          | 9.28%  | 0.6152          | 0.1670         | 0.6375             | 10.69%            | 2.90%            | 11.08%               | 3.8167   | 0.1906                |
| 054.02      | 2                       | 2                               | 6.4000    | 1.3435    |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 065.03      | 2                       | 2                               | 149.0000  | 210.7178  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 065.99      | 1                       |                                 | 260.9889  |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 079.01      | 1                       |                                 | 0.0000    |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 091.01      | 1                       |                                 | 0.0000    |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 103.02      | 1                       |                                 | 7.0300    |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 104.00      | 1                       |                                 | 3.5500    |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 105.00      | 1                       |                                 | 1.5450    |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 106.00      | 1                       |                                 | 5.8000    |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 106.02      | 21                      | 20                              | 7.9274    | 6.1226    | 5.6971                       | 1.0383                    | 0.1642          | 18.22% | 6.1141          | 0.4562         | 6.1311             | 77.13%            | 5.76%            | 77.34%               | 13.4381  | 0.4701                |
| 108.01      | 1                       |                                 | 164.0000  |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 108.02      | 2                       | 2                               | 2.0975    | 1.6299    |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 109.02      | 10                      | 10                              | 109.4462  | 140.1880  | 68.1530                      | 14.1142                   | 3.1560          | 20.71% | 140.1780        | 2.3779         | 140.1981           | 128.08%           | 2.17%            | 128.10%              | 58.9579  | 2.5410                |
| 109.99      | 2                       | 2                               | 61.2500   | 2.4749    |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 120.00      | 12                      | 12                              | 0.7562    | 0.1258    | 0.7241                       | 0.0269                    | 0.0055          | 3.72%  | 0.1254          | 0.0140         | 0.1261             | 16.58%            | 1.85%            | 16.68%               | 9.0060   | 0.0138                |
| 120.05      | 2                       | 2                               | 0.69125   | 0.0159099 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 120.99      | 1                       |                                 | 0.82      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 121.00      | 12                      | 12                              | 0.8784083 | 0.2200964 | 0.8210217                    | 0.0430921                 | 0.008796        | 5.25%  | 0.219908        | 0.012877       | 0.2202847          | 25.03%            | 1.47%            | 25.08%               | 17.10634 | 0.013433              |
| 121.05      | 2                       | 2                               | 0.844     | 0.0410122 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 121.99      | 1                       |                                 | 0.91      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 122.00      | 12                      | 12                              | 1.1514    | 0.104155  | 1.1354439                    | 0.0232859                 | 0.004753        | 2.05%  | 0.1036571       | 0.014386       | 0.1046506          | 9.00%             | 1.25%            | 9.09%                | 7.274567 | 0.01535               |
| 122.05      | 2                       | 2                               | 1.11925   | 0.1071267 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 122.99      | 1                       |                                 | 1.205     |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 123.99      | 1                       |                                 | 2.47      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 124.00      | 11                      | 11                              | 0.37985   | 0.2535937 | 0.2790214                    | 0.0239298                 | 0.005102        | 8.58%  | 0.2534366       | 0.012624       | 0.2537508          | 66.72%            | 3.32%            | 66.80%               | 20.10109 | 0.011064              |
| 124.02      | 1                       |                                 | 0.26      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 124.05      | 2                       | 2                               | 0.234     | 0.0579828 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 124.99      | 1                       |                                 | 0.24      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 125.00      | 12                      | 11                              | 2.4172045 | 0.1099813 | 2.3861921                    | 0.0598525                 | 0.012761        | 2.51%  | 0.1092557       | 0.017837       | 0.1107021          | 4.52%             | 0.74%            | 4.58%                | 6.206355 | 0.016736              |
| 125.05      | 2                       | 2                               | 2.215     | 0.0212132 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 126.00      | 12                      | 12                              | 0.8011833 | 0.1134181 | 0.7717159                    | 0.0215828                 | 0.004406        | 2.80%  | 0.1129842       | 0.014016       | 0.1138503          | 14.10%            | 1.75%            | 14.21%               | 8.122671 | 0.013417              |
| 126.05      | 2                       | 2                               | 0.789     | 0.0056569 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 126.99      | 1                       |                                 | 0.86      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 127.00      | 12                      | 11                              | 0.3691364 | 0.0180112 | 0.3703182                    | 0.0126306                 | 0.002693        | 3.41%  | 0.0169389       | 0.008658       | 0.0190232          | 4.59%             | 2.35%            | 5.15%                | 2.197275 | 0.009909              |
| 127.05      | 2                       | 2                               | 0.37225   | 0.0109602 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 127.99      | 1                       |                                 | 0.385     |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 128.00      | 12                      | 11                              | 0.4718182 | 0.0143026 | 0.4713052                    | 0.0150776                 | 0.003215        | 3.20%  | 0.0125886       | 0.009601       | 0.0158321          | 2.67%             | 2.03%            | 3.36%                | 1.648979 | 0.010182              |

| Method Code | Total # Labs Submitting | # Labs Included in Calculations | Mean      | SD        | Assigned Value - Robust Mean | AAFCCO CS ffp - Robust sd | Uncertainty (U) | % RSD  | Between Labs sL | Within Labs sF | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr    | Average Range (R-bar) |
|-------------|-------------------------|---------------------------------|-----------|-----------|------------------------------|---------------------------|-----------------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|----------|-----------------------|
| 128.05      | 2                       | 2                               | 0.50375   | 0.0265165 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 128.99      | 1                       |                                 | 0.53      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 129.00      | 12                      | 11                              | 0.9794091 | 0.0265366 | 0.9846169                    | 0.0179773                 | 0.003833        | 1.83%  | 0.0250424       | 0.012415       | 0.027951           | 2.56%             | 1.27%            | 2.85%                | 2.25136  | 0.011727              |
| 129.05      | 2                       | 2                               | 0.998     | 0.039598  |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 129.99      | 1                       |                                 | 1.125     |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 130.00      | 13                      | 13                              | 0.656     | 0.0687353 | 0.6414702                    | 0.0415324                 | 0.008145        | 6.47%  | 0.0683185       | 0.010688       | 0.0691495          | 10.41%            | 1.63%            | 10.54%               | 6.469729 | 0.011662              |
| 130.05      | 3                       | 3                               | 0.611     | 0.0247588 | 0.611                        | 0.0247588                 | 0.010108        | 4.05%  | 0.0143062       | 0.028577       | 0.0319583          | 2.34%             | 4.68%            | 5.23%                | 1.118308 | 0.023333              |
| 130.99      | 1                       |                                 | 0.715     |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 131.00      | 11                      | 11                              | 0.1933773 | 0.0168935 | 0.1936962                    | 0.0151379                 | 0.003227        | 7.82%  | 0.0166426       | 0.004103       | 0.0171408          | 8.61%             | 2.12%            | 8.86%                | 4.178024 | 0.004427              |
| 131.02      | 1                       |                                 | 0.2       |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 131.05      | 3                       | 3                               | 0.1386667 | 0.0535755 | 0.1386667                    | 0.0535755                 | 0.021872        | 38.64% | 0.0534478       | 0.005228       | 0.0537029          | 38.54%            | 3.77%            | 38.73%               | 10.27191 | 0.006                 |
| 131.99      | 1                       |                                 | 0.24      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 132.00      | 12                      | 11                              | 0.5565909 | 0.0410827 | 0.5483256                    | 0.0249514                 | 0.00532         | 4.55%  | 0.0402605       | 0.011566       | 0.0418889          | 7.23%             | 2.08%            | 7.53%                | 3.62172  | 0.009545              |
| 132.05      | 2                       | 2                               | 0.592     | 0.0452548 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 132.99      | 1                       |                                 | 0.745     |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 133.00      | 11                      | 11                              | 0.9547409 | 0.2799589 | 0.8843182                    | 0.031433                  | 0.006702        | 3.55%  | 0.2797049       | 0.01686        | 0.2802126          | 29.30%            | 1.77%            | 29.35%               | 16.61973 | 0.018427              |
| 133.05      | 2                       | 2                               | 0.884     | 0.1357645 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 133.99      | 1                       |                                 | 1.005     |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 134.00      | 12                      | 11                              | 0.6353636 | 0.0472182 | 0.6428339                    | 0.0333573                 | 0.007112        | 5.19%  | 0.0468839       | 0.007932       | 0.0475501          | 7.38%             | 1.25%            | 7.48%                | 5.995073 | 0.008727              |
| 134.05      | 2                       | 2                               | 0.695     | 0.0494975 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 134.99      | 1                       |                                 | 0.72      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 135.00      | 12                      | 11                              | 0.5368227 | 0.1481516 | 0.4974629                    | 0.014893                  | 0.003175        | 2.99%  | 0.1481128       | 0.004799       | 0.1481905          | 27.59%            | 0.89%            | 27.61%               | 30.88124 | 0.004627              |
| 135.05      | 3                       | 3                               | 0.4983333 | 0.023094  | 0.4983333                    | 0.023094                  | 0.009428        | 4.63%  | 0.0221284       | 0.009345       | 0.0240208          | 4.44%             | 1.88%            | 4.82%                | 2.570383 | 0.012667              |
| 135.99      | 1                       |                                 | 0.56      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 136.00      | 2                       | 2                               | 0.184     | 0.0226274 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 136.01      | 6                       | 5                               | 0.1874    | 0.0126807 | 0.1874                       | 0.0126807                 | 0.00401         | 6.77%  | 0.0126491       | 0.001265       | 0.0127122          | 6.75%             | 0.67%            | 6.78%                | 10.04988 | 0.0008                |
| 136.99      | 2                       | 2                               | 0.17      | 0.0707107 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 137.00      | 7                       | 6                               | 0.43525   | 0.0276799 | 0.4354923                    | 0.0309131                 | 0.008924        | 7.10%  | 0.026857        | 0.009474       | 0.0284789          | 6.17%             | 2.18%            | 6.54%                | 3.006122 | 0.008833              |
| 137.05      | 1                       |                                 | 0.365     |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 137.99      | 1                       |                                 | 0.52      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 138.00      | 12                      | 12                              | 0.6851333 | 0.1645613 | 0.645171                     | 0.0472542                 | 0.009646        | 7.32%  | 0.164379        | 0.010952       | 0.1647434          | 23.99%            | 1.60%            | 24.05%               | 15.0425  | 0.009733              |
| 138.05      | 2                       | 2                               | 0.60725   | 0.0533866 |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 138.99      | 1                       |                                 | 0.715     |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |
| 139.00      | 1                       |                                 | 0.05      |           |                              |                           |                 |        |                 |                |                    |                   |                  |                      |          |                       |