## Table 1.: METHOD QUALITY CONTROL CRITERIA

| **Test** | **VERSION : DATE** | **IC** | **MDLs** | **LCR or LDR** | **CALIBRATION BLANK** | **LRB, MB or PB** | **LCS or LFB** | **MS/MSD (LFM)** | **CCC** | **IPC or LPC** | **QCS** | **Additional QC Requirements and Comments** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| methods not listed | NA | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 120.1 | :1982 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 130.1 | :1971 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 150.1 | :1982 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 160.1 | :1971 |  |  |  |  |  |  |  |  |  | QTRLY | Laboratories should be analyzing replicates on a at a rate of 1 per batch or 10%, whichever is greater.. Replicates should maintain an agreement of +/‑ 10% between replicates |
| 160.2 | :1971 |  |  |  |  |  |  |  |  |  | QTRLY | Laboratories should be analyzing replicates on a at a rate of 1 per batch or 10%, whichever is greater.. Replicates should maintain an agreement of +/‑ 10% between replicates |
| 160.3 | :1971 |  |  |  |  |  |  |  |  |  | QTRLY | Laboratories should be analyzing replicates on a at a rate of 1 per batch or 10%, whichever is greater.. Replicates should maintain an agreement of +/‑ 10% between replicates |
| 160.4 | :1971 |  |  |  |  |  |  |  |  |  | QTRLY | Laboratories should be analyzing replicates on a at a rate of 1 per batch or 10%, whichever is greater.. Replicates should maintain an agreement of +/‑ 10% between replicates |
| 160.5 | :1974 |  |  |  |  |  |  |  |  |  | QTRLY | Laboratories should be analyzing replicates on a at a rate of 1 per batch or 10%, whichever is greater.. Replicates should maintain an agreement of +/‑ 10% between replicates |
| 180.1 | 2.0:1993 | R | R, Y | R, 6M | R, AC, 10S, End Batch | R, Batch |  |  | R, AC |  |  | Verify 0.02 NTU resolution at three points from 0<X<1NTU, using freshly prepared Formazin on a quarterly basis. Maintain control  charts on performance. |
| 200.2 | 2.8:1994 |  |  |  |  |  |  |  |  |  |  | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. |
| 200.7 | 4.4:1994 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. Serial Dilution required at 10X MDL. |
| 200.8 | 5.3:1994 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. |
| 200.9 | 2.2:1994 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. Serial Dilution required at 10X MDL. |
| 218.5 | :1982 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 218.6 | 3.3:1994 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R,Batch | R, Batch, QReps | R, 10% | R, Daily, 20 | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 245.1 | 3.0:1994 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY |  |
| 245.2 | 1974 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 245.5 | 2.3:1991 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 300.0 | 2.1:1993 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R,Batch | R, Batch, QReps | R, 10% | R, Daily, 20 | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 310.1 | :1978 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 3111B | 22nd ed.:2012 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. Serial Dilution required at 10X MDL. |
| 3112B | 22nd ed.:2012 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. Serial Dilution required at 10X MDL. |
| 3113B | 22nd ed.:2012 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. Serial Dilution required at 10X MDL. |
| 3114 | 22nd ed.:2012 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. Serial Dilution required at 10X MDL. |
| 325.2 | :1978 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 330.1 | :1978 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 330.5 | :1978 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 335.4 | 1.0:1993 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 350.1 | 2.0:1993 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 350.3 | :1974 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 351.2 | 2.0:1993 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 352.1 | :1971 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 353.2 | 2.0:1993 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 354.1 | :1971 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 365.1 | 2.0:1993 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 365.2 | :1971 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 370.1 | :1978 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 375.2 | 2.0:1993 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 376.1 | :1978 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 405.1 | :1974 |  |  |  | R, Batch | R, Batch |  |  |  |  | QTRLY | Seed Blank & Glucose‑Glutamic Acid check required per batch. Labs must maintain control charts of blank and check solution  performance. Control limits must be established in accordance with 5210B, p 6a. |
| 410.1 | :1978 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 8 & 9 of the method |
| 410.4 | 2.0:1993 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 413.2 | :1978 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | Labs must utilize reference oil (section 6.4) to develop initial percent recoveries based on a minimum of 10 replicates performed on  separate days. Labs must update percent recoveries every 20 to 30 check samples. |
| 415.1 | :1974 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 418.1 | :1978 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 420.4 | 1.0:1993 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 524.2 | 4.1:1995 | R | R, Y |  |  | R, Before Analysis, Batch, 12hr | R, Batch, 20S, 12hr | See Sect 9.10 | R, 12hr | R, DAILY | QTRLY |  |
| 525.2 | 2.0:1995 | R | R, Y |  |  | R, Before Analysis, Batch, 12hr | R, Batch, 20S, 12hr | R, Batch, 20S, 12hr | R, 12hr |  | QTRLY | Surrogate(s): DFTPP, endrin, 4,4'‑DDT |
| 601.0 | :2012 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 10%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 10% of samples |
| 602.0 | :2012 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 10%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 10% of samples |
| 603.0 | :2012 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 10%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 10% of samples |
| 608.0 | :2012 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 10%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 10% of samples |
| 610.0 | :2012 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 10%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 10% of samples |
| 624.0 | :2012 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 5%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 5% of samples |
| 625.0 | :2012 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 5%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 5% of samples  Internal Standard(s) and Surrogate(s): R, See Table 8 |
| 1613.0 | REV B:1994 | R | R, Y |  |  | R, After LFB, 12hr, 10S | R, Batch |  | R, 12hr |  | QTRLY |  |
| 1631.0 | REV E:2002 | R | R, Y |  |  | R, in Triplicate Monthly | R, 12hr, 10S |  | R, 12hr, 10S |  | QTRLY |  |
| 1632.0 | REV A:1998 | R | R, Y |  |  | R, After LFB, 12hr, 10S | R, 12hr, 10S |  | R, 12hr, 10S |  | QTRLY |  |
| 1636.0 | REV A:1996 | R | R, Y |  | After CCC | R, After LFB, 12hr, 10S | R, 12hr, 10S |  | R, 12hr, 10S |  | QTRLY |  |
| 1637.0 | REV A:1996 | R | R, Y |  | After CCC | R, After LFB, 12hr, 10S | R, 12hr, 10S |  | R, 12hr, 10S |  | QTRLY |  |
| 1638.0 | :1996 | R | R, Y |  | After CCC | R, After LFB, 12hr, 10S | R, 12hr, 10S |  | R, 12hr, 10S |  | QTRLY |  |
| 1639.0 | :1996 | R | R, Y |  | After CCC | R, After LFB, 12hr, 10S | R, 12hr, 10S |  | R, 12hr, 10S |  | QTRLY |  |
| 1640.0 | :1997 | R | R, Y |  | After CCC | R, After LFB, 12hr, 10S | R, 12hr, 10S |  | R, 12hr, 10S |  | QTRLY |  |
| 1668.0 | :1999 | R | R, Y |  |  | R, After LFB, 12hr, 20S |  | All samples w/labeled cmpds. | R, 12hr, 10S |  | QTRLY |  |
| 2130 | 22nd ed.:2012 | R | R, Y | R, 6M | R, AC, 10S, End Batch | R, Batch |  |  | R, AC |  |  | Verify 0.02 NTU resolution at three points from 0<X<1NTU, using freshly prepared Formazin on a quarterly basis. Maintain control  charts on performance. |
| 2320B | 22nd ed.:2012 | R | R, Y | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch |  | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 2540B, C, D, E, F | 22nd ed.:2012 | R |  |  |  |  |  |  |  |  |  | Contractors should run sample replicates on a 10% basis. Replicates should agree within +/-10%. |
| 4500CL(‑)‑D, E | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 4500NH3-D, F | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 4500N(Org)-B, C | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 4500CN‑C, E, F, G, I | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 4500F(‑)‑B, C, D, E | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 4500NO2‑B | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 4500NO3‑D, E, F | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 4500P‑E, F | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 4500Si-D | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 5210B, C | 22nd ed.:2012 |  |  |  | R, Batch |  |  |  |  |  |  | Seed Blank & Glucose‑Glutamic Acid check required per batch. Labs must maintain control charts of blank and check solution  performance. Control limits must be established in accordance with 5210B, p 6a. |
| 5220B | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, Batch, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 5310 | 22nd ed.:2012 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY |  |
| 6010C | 3.0:2000 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. |
| 6020A | 6.0:2004 | R | R, Y | R, Y | R, AC, 10S, End Batch | R, Batch, 20S | R, Batch | R, Batch, 10% |  | R, AC, 10S, End Batch | QTRLY | 0.02 NTU verification (180.1) must be conducted every 12hr when analyzing turbidity for omission of sample digestion. |
| 7110B | 22nd ed.:2012 | R |  |  | R, Batch |  |  |  | R, Batch, 10% |  |  | Run one (1) duplicate per 10 samples. RPD must be <= 30 % |
| 8081B | 2.0:2000 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 5%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 5% of samples  Internal Standard(s) and Surrogate(s): R, See Table 8 |
| 8082A | 1:2000 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 5%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 5% of samples  Internal Standard(s) and Surrogate(s): R, See Table 8 |
| 8260B | 2.0:1996 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 5%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 5% of samples  Internal Standard(s) and Surrogate(s): R, See Table 8 |
| 8270D | 4.0:1998 | R | R, Y |  | R, Before Analysis, Batch |  |  | R, 5%, Monthly | R, DAILY |  | QTRLY | Laboratory Control Standard required 5% of samples  Internal Standard(s) and Surrogate(s): R, See Table 8 |
| 9010B | 2.0:1996 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 9036 | 0:1986 | R | R, 6M | R, 6M | R, AC, 10S, End Batch | R, Batch | R, Batch | R, 10% | R, AC | R, CB, 10S, End Batch | QTRLY | See sections 9 & 10 of the method |
| 9221A, B, C, E | 22nd ed.:2012 |  |  |  | R, AC, 10S, End Batch |  | R, Batch |  |  |  | QTRLY | Duplicate analyses must be conducted on 10% of all samples and all positive routine samples. QC criteria found in 9020B must be  followed. The most recent QC results determined in 9020B must be reported with each IDEM/OWQ sample set. |
| 9222A, B, C, D | 22nd ed.:2012 |  |  |  | R, AC, 10S, End Batch |  | R, Batch |  |  |  | QTRLY | Duplicate analyses must be conducted on 10% of all samples and all positive routine samples. QC criteria found in 9020B must be  followed. The most recent QC results determined in 9020B must be reported with each IDEM/OWQ sample set. |
| 9310 | 0:1986 | R |  |  | R, Batch | R, 3 per Batch |  |  | R, Batch, 10% |  |  | Run one (1) duplicate per 10 samples. RPD must be <= 30 % |
| 9320 | 0:1986 | R |  |  | R, Batch | R, 3 per Batch |  |  | R, Batch, 10% |  |  | Run one (1) duplicate per 10 samples. RPD must be <= 30 % |