

CMPT Water PT Grading Schemes

| Table 1: CMPT Grading Scale for PT Drinking Water Samples | | | | | | | | | |
|-----------------------------------------------------------|--------------------------|-------------------|-----------------------|---------------------------|----------------------------|---------------------|----------------------|----------------------|----------------------|
| MEAN cfu/100mL, MPN/100mL, cfu/mL | 0 | 15 | 25 | 30 | 40 | 50 | 60 | 80 | 100 |
| Scores (see Table 2) | NG = 3 | 1 - 29 = 3 | 10 - 42 = 3 | 16 - 50 = 3 | 21 - 62 = 3 | 32 - 97 = 3 | 46 - 119 = 3 | 52 - 142 = 3 | 58 - 165 = 3 |
| | Growth = 0 | 30 - 59 = 2 | 1 - 9, 43 - 59 = 2 | 1 - 15 = 2 51 - 80 = 2 | 1 - 20 = 2 62 - 100 = 2 | 10 - 31, >97 = 2 | 16 - 45, >119 = 2 | 25 - 51, >142 = 2 | 34 - 57, >165 = 2 |
| | 0 - <2 MPN/100 ml = 3 | >59 = 1 NG = 0 | >59 = 1 NG = 0 | >81 = 1 NG = 0 | >101 = 1 NG = 0 | 1 - 9 = 1 NG = 0 | 1 - 15 = 1 NG = 0 | 1 - 24 = 1 NG = 0 | 1 - 33 = 1 NG = 0 |

| Table 2: PT Drinking Water Samples Assessment Criteria | |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Score | Assessment Criteria |
| 3 | Result is considered accurate (see Table 1) |
| 2 | Result is acceptable with minor error (see Table 1) |
| 1 | Major error (see Table 1) False Positive: a sample containing only total coliforms is reported as containing thermotolerant coliforms or <i>E.coli</i> |
| 0 | <u>Very major</u> error with potential water safety consequences, i - A sample containing thermotolerant bacteria is reported as containing only total coliforms and no <i>E.coli</i> , or ii - A sample containing <i>E.coli</i> is reported as containing only total coliforms iii - False Negative: a report of no growth when bacteria are present. |

Please Note:

- Grading is assessed against the Group Means of Total Coliforms (TC), Thermotolerant Coliforms (ThC) and *E.coli* (EC).
- TC and ThC or EC are a combined score out of 3 for drinking water samples: #1, 2, 3, 4, **Total = 12**.
- Additional scores for *E. coli* testing are out of a score of 3 each for drinking water samples #1, 2, 3, 4, **Total = 12**.
- When only one component (ie TC, ThC or EC) of a water sample is reported, a qualitative score is given, eg "correct/incorrect".
- When no definitive MF count is reported, ie count is preceded by > or <, a qualitative score is given, eg "correct/incorrect".
- When no definitive MPN count is reported, ie count is preceded by > or < and the group mean is outside of the MPN reported count, a qualitative comment, incorrect, is given. For example, if the group mean is 20 MPN/100 ml and the report is >23 MPN/100 ml, the report would be graded as incorrect. Similarly, if the group mean is >23 MPN/100 ml, and the reported MPN count is <23, the report would be graded as incorrect, also.
- Recreational water samples for *Enterococci*, *Pseudomonas* or fresh water beach *E. coli* testing is out of a **total of 3 per sample**.
- Laboratories are graded depending on the scope of testing that is performed.

| Table 3: CMPT Grading Scale for PT Recreational Samples: Membrane Filtration | | | | | | | | | | |
|------------------------------------------------------------------------------|------------|-------------|-------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|
| Mean cfu/100ml | 30 | 60 | 70 | 80 | 90 | 100 | 200 | 300 | 350 | 400 |
| Scores | 1 - 49 = 3 | 38 - 80 = 3 | 44 - 99 = 3 | 55 - 103 = 3 | 62 - 118 = 3 | 69 - 134 = 3 | 155 - 248 = 3 | 253 - 345 = 3 | 299 - 406 = 3 | 335 - 467 = 3 |
| | | 1 - 37 = 2 | 1 - 43 = 2 | 1 - 54 = 2 | 1 - 61 = 2 | 1 - 68 = 2 | 1 - 154 = 2 | 1 - 252 = 2 | 1 - 298 = 2 | 1 - 334 = 2 |
| | ≥ 50 = 2 | ≥ 81 = 2 | ≥ 100 = 2 | ≥ 104 = 2 | ≥ 119 = 2 | ≥ 135 = 2 | ≥ 249 = 2 | ≥ 346 = 2 | ≥ 406 = 2 | ≥ 468 = 2 |
| | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 |

Scores are calculated based on Poisson Probability, 0.05% - 99.95%. Ranges are adjusted to the mean from reported results.

| Table 4: CMPT Grading Scale for PT Recreational Samples: Colilert Quantitray, Enterolert, Pseudoalert, MPN | | | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------|
| Mean MPN/100ml | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 200 | 300 | 400 | 500 |
| Scores | 1 - 89 = 3 | 10 - 119 = 3 | 15 - 150 = 3 | 22 - 150 = 3 | 22 - 170 = 3 | 22 - 220 = 3 | 32 - 350 = 3 | 70 - 710 = 3 | 100 - 1100 = 3 | 150 - 1550 = 3 | 200 - 1999 = 3 |
| | | 1 - 9 = 2 | 1 - 14 = 2 | 1 - 21 = 2 | 1 - 21 = 2 | 1 - 21 = 2 | 1 - 31 = 2 | 1 - 69 = 2 | 1 - 99 = 2 | 1 - 149 = 2 | 1 - 199 = 2 |
| | ≥ 90 = 2 | ≥ 120 = 2 | ≥ 151 = 2 | ≥ 151 = 2 | ≥ 171 = 2 | ≥ 221 = 2 | ≥ 351 = 2 | ≥ 711 = 2 | ≥ 1101 = 2 | ≥ 1551 = 2 | ≥ 2000 = 2 |
| | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 | NG = 0 |

Scores are calculated based on 95% confidence limits (based on Standard Methods)