**Weston Solutions qPCR Report - Sample Results**

**Assay:** Human Bacteroidales - HF183TMCaMan  
**Method:** ddPCR

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Site ID</th>
<th>Weston DNA ID</th>
<th>Date Sampled</th>
<th>Time Sampled</th>
<th>Matrix</th>
<th>Sample Result</th>
<th>Qualifier</th>
<th>Sample Concentration</th>
<th>Sample Stdev</th>
<th>Units</th>
<th>SLOD</th>
<th>SLLOQ</th>
<th>cpr</th>
<th>Inhibition Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS4-SMG-095</td>
<td>MS4-SMG-095</td>
<td>6861MS4-SMG-095</td>
<td>08/07/19</td>
<td>0900</td>
<td>FW</td>
<td>ND</td>
<td>¥</td>
<td>29</td>
<td>0</td>
<td>copies/100mL</td>
<td>87</td>
<td>87</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SDR-768</td>
<td>SDR-768</td>
<td>6863SDR-768</td>
<td>08/07/19</td>
<td>1045</td>
<td>FW</td>
<td>ND</td>
<td>¥</td>
<td>29</td>
<td>0</td>
<td>copies/100mL</td>
<td>86</td>
<td>86</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SDR-1031</td>
<td>SDR-1031</td>
<td>6865SDR-1031</td>
<td>08/07/19</td>
<td>1120</td>
<td>FW</td>
<td>Detected, ROQ</td>
<td>¥</td>
<td>13,243</td>
<td>664</td>
<td>copies/100mL</td>
<td>86</td>
<td>86</td>
<td>464</td>
<td>0</td>
</tr>
<tr>
<td>SDR-723</td>
<td>SDR-723</td>
<td>6867SDR-723</td>
<td>08/07/19</td>
<td>1141</td>
<td>FW</td>
<td>ND</td>
<td>¥</td>
<td>29</td>
<td>0</td>
<td>copies/100mL</td>
<td>88</td>
<td>88</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**Abbreviations:**  
Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW = Fresh Water; GW = Ground Water; L = L; SLT = Salt Water; SW = Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n = number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rx = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

**Footnotes:**  
*Sample Process Control (SPC), Sketa assay for salmon sperm.  
*Inhibition Control = assay used for 2 well spike with DNA dilution method.  
*Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B).  
*If shown: ¥Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr.  
*Concentration = mean of at least 3 technical replicates.  
*Standard Deviation of at least 3 technical replicates.  
*For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4).  
*SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B.  
*Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.
Weston Solutions qPCR Report - Standard Curve Metrics

Client: County of San Diego  Project: DW MS4 MST  Survey: No 1  Date Received: 8/7/2019

QA/QC Information
Assay Human Bacteroidales - HF183TMCaMan

<table>
<thead>
<tr>
<th>Detection Limits</th>
<th>ND sub</th>
<th>LOD</th>
<th>LLOQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>cpr (copies per reaction)</td>
<td>1.0</td>
<td>3.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Copies per genome: 7

AVG Filtration Volume: 100 mL

Sample result calculations use cpr values based on the following definitions:
- ND: Cq=maximum cycle number, negative result.
- BDL: 0<Cq≤LOD, Equivocal result.
- DNQ: LOD<CqlLOQ, positive binary result.
- ROQ: Cq>LLOQ, positive result.
- LLOQ: lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu  8/26/2019
QC Officer (Satomi Yonemasu)  Date