**Weston Solutions qPCR Report - Sample Results**

**Client:** County of San Diego  
**Project:** DW MS4 MST  
**Survey:** No 3  
**Date Received:** 08/22/19  
**n Samples:** 6  
**Date Filtered:** 08/22/19  
**Date Extracted:** 08/23/19  
**Date ddPCR:** 08/29/19

<table>
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<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 Result</th>
<th>Concentration</th>
<th>Sample StdDev</th>
<th>Units</th>
<th>SLOD</th>
<th>SLLOQ</th>
<th>cpr</th>
<th>Inhibition</th>
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</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;  
- LOD = Limit of Detection;  
- SLOD = Sample Specific Limit of Detection;  
- SLOQ = Sample Specific Lower Limit of Quantification;  
- SPC = Sketa assay for salmon sperm;  
- SLT = Salt Water;  
- SW = Storm Water;  
- N/A = Not Applicable;  
- ND = Not Detected;  
- NDsub = substitution value for nondetects;  
- PCR = Polymerase chain reaction;  
- Rxs = reactions;  
- StdDev = Standard Deviation;  
- TSC = Target Sequence Copies;  
- ROQ = Range of Quantification;  
- TSC/ul = Target concs in TSC/ul = copies/ul x 4.  

**Footnotes:**  
1Sample Process Control (SPC), Sketa assay for salmon sperm.  
2Inhibition Control = assay used for 2 well spike with DNA dilution method.  
3Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B).  
4If 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.  
5Concentration = mean of at least 3 technical replicates.  
6Standard Deviation of at least 3 technical replicates.  
7For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4).  
8SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B.  
9Inhibition: 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.
QA/QC Information
Assay: Human Bacteroidales - HF183TMCaMan

standard source: genomic DNA

<table>
<thead>
<tr>
<th>Method Detection Limits</th>
<th>ND sub</th>
<th>LOD</th>
<th>LLOQ</th>
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</thead>
<tbody>
<tr>
<td>cpr (copies per reaction)</td>
<td>1.0</td>
<td>3</td>
<td>3</td>
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</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<Cq≤LLOQ, 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.