Weston Solutions qPCR Report - Sample Results

**Client:** County of San Diego  
**Project:** Rainbow Creek  
**Survey:** Event 4  
**Date Received:** 09/16 and 09/17/19  
**n Samples:** 11  
**Date Filtered:** 09/16 and 09/17/19  
**Date Extracted:** 10/01/19  
**Date ddPCR:** 10/08/19

### Assay: Human Bacteroidales - HF183TMCaMan
- **µL Template per Reaction:** 5
- **Method:** ddPCR
- **Lab Blank:** passed n= 3
- **No Template Controls:** passed n= 3
- **Positive Extraction Controls:** passed n= 11
- **Inhibition Control:** HF183 (B.dorei)

**File name(s):** Plate 571 HF183TMCaMan dd ka

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<th>Site ID</th>
<th>Weston DNA ID</th>
<th>Date Sampled</th>
<th>Time Sampled</th>
<th>Matrix</th>
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<th>Sample Stdev</th>
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**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; 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; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific 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).  
- SLLOQ and SLOD: 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: Rainbow Creek
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Comments:

QA/QC Information
Assay Human Bacteroidales - HF183TMCaMan

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.

Satomi Yonemasu 10/11/2019
QC Officer (Satomi Yonemasu) Date

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