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WET Labs

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ECO Phycocyanin Fluorometer Characterization Sheet

Date: 3/5/2021

S/N: BBFL2WB-1440

Phycocyanin (Basic Blue 3 equivalent) concentration expressed in ppb can be derived using the equation:

Phycocyanin (ppb) = Scale Factor * (Output - Dark Counts)

	Digital
Dark Counts	59 counts
Scale Factor (SF)	0.0398 ppb/count
Maximum Output	4130 counts
Resolution	1.2 counts
Ambient temperature during characterization	21.0 °C

Dark Counts: Signal output of the meter in clean water with black tape over detector.

SF: Determined using the following equation: SF = x ÷ (output - dark counts), where x is the concentration of the solution used during instrument characterization. SF is used to derive instrument output concentration from the raw signal output of the fluo

Maximum Output: Maximum signal output the fluorometer is capable of.

Resolution: Standard deviation of 1 minute of collected data.

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ECO Calibration and Repairs

Diagnosis: Evaluated instrument BBFL2WB-1440 and found no problems.

Repairs and Modifications: Instrument found to be within specification, post-deployment calibration equals final calibration. Standard service performed.

Comments: New Device file and characterization sheets included.

ECO Standard Service:

The instrument bulkhead connector, pressure housing and window\optics are inspected for damage. Instrument is checked to determine proper functionality. Incoming settings and memory are collected if incoming condition allows.

If applicable, a pre-service characterization is performed. Data is analyzed and Instrument is rescaled.

The head is inspected for cracks in detector and motor bores. Case seals, shaft, shaft seal, faceplate, wiper, desiccant pack, and batteries (if equipped) are replaced. Noise, stability, and live pressure test performed.

Final calibration and characterization is completed. Including calibration of thermistor and pressure sensor (if equipped). A device file, repair sheet, and new characterization sheets are provided to customer via hard copy and CD.