WET Labs

C-Star Calibration

Date   June 20, 2008   S/N#   CST-1034DR   Pathlength   25cm

	Analog output	Digital output
V_d	0.065 V	66 counts
V_{air}	~~7.784 V~~	3975 counts
V_{ref}	4.692 V	3896 counts

(handwritten: 4.784 V, typo-verified by Wetlabs June 2008 — ES)

Temperature of calibration water   23.7 °C
Ambient temperature during calibration   22.9 °C

Relationship of transmittance (Tr) to beam attenuation coefficient (c), and pathlength (x): $Tr = e^{-cx}$

To determine beam transmittance: $Tr = (V_{sig} - V_{dark}) / (V_{ref} - V_{dark})$

To determine beam attenuation coefficient: $c = -1/x * \ln(Tr)$

V_d Meter output with the beam blocked. This is the offset.
V_{air} Meter output in air with a clear beam path.
V_{ref} Meter output with clean water in the path.
Temperature of calibration water: temperature of clean water used to obtain V_{ref}.
Ambient temperature: meter temperature in air during the calibration.
V_{sig} Measured signal output of meter.