

Sea_Surface_Temperature

Location: 1m

Manufacturer: SeaBird

Model: This is either SBE37 or SBE16

Accuracy: < 0.01 °C

Sea_Surface_Salinity

Location: 1m

Manufacturer: SeaBird

Model: This is either SBE37 or SBE16

Accuracy: < 0.05

CO2

Measurement Method: Absolute, non-dispersive infrared (NDIR) gas analyzer

Manufacturer: Licor

Model: LI-820

Frequency: 3hr cycle

Accuracy of CO₂water: 2 µatm

Accuracy of CO₂air: 1 µatm

Precision of CO₂water: 0.7 µatm

Precision of CO₂air: 0.6 µatm

CO₂ Sensor Calibration: At the beginning of each sample, the instrument self-calibrates using a zero and high standard. The zero standard is generated by cycling a small amount of air through a soda lime chamber. The high standard is from a cylinder of calibrated standard reference gas from ESRL. ESRL standards are traceable to WMO x93 scale with a stated reproducibility of 0.06 µmol mol⁻¹. For more information on estimates of accuracy and precision of the MAPCO₂ system, see Sutton et al. 2014 (reference below).

Manufacturer of CO₂ calibration gases: NOAA Earth System Research Laboratory (ESRL)

Method References: Sutton, A.J., Sabine, C.L., Maenner-Jones, S., Lawrence-Slavas, N., Meinig, C., Feely, R.A., Mathis, J.T., Musielewicz, S., Bott, R., McLain, P.D., Fought, J., Kozyr, A., 2014b. A high-

frequency atmospheric and seawater pCO₂ data set from 14 open ocean sites using a moored autonomous system. *Earth Sys. Sci. Data*, 6, doi: 10.5194/essd-6-353-2014, 353–366.