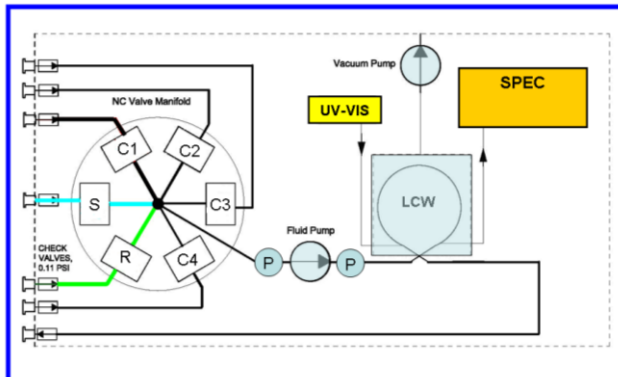


## CDOM MAPPER

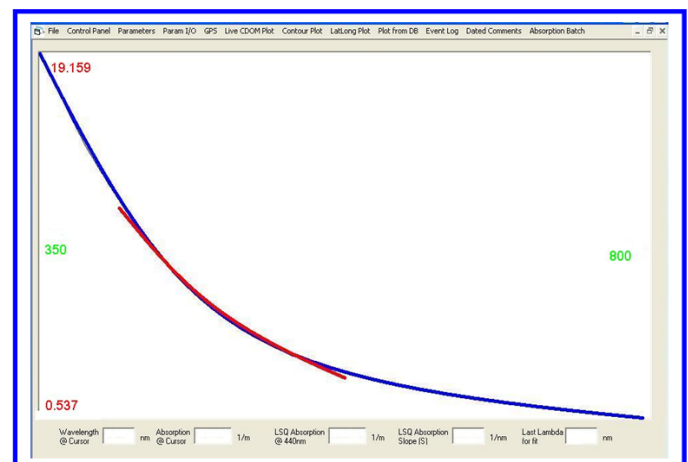
The Chromophoric Dissolved Organic Matter Mapping instrument, or CDOM Mapper, provides geo-referenced absorption measurements of CDOM with increased robustness, user-friendliness, resolution, frequency, and sensitivity relative to presently-available instrumentation. This is accomplished by pumping sea water samples through a Liquid Waveguide Capillary Cell (LWCC), illuminating with a UV-VIS light source, and measuring the resulting light spectra with its integrated spectrometer. A single sample requires less than 60 seconds to collect and process. Sampling intervals are user programmable from continuous sampling to many hours between samples.

Periodically, CDOM Reference measurements are taken under pre-programmed control by spectral analysis of ultrapure water with salinity matched to sample water.



Also provided are four liquid supply ports for a variety of cleaning compounds. Ultrapure water, bases, acids, solvents, detergents, surfactants, and even gases are able to be applied to the optical waveguide in any sequence desired including repeat application under pre-programmed "recipes". Cleaning cycles can be scheduled for clock times, after a number of cycles, or automatically in reaction to increased integration time and other parameters indicating a need to clean.

After each sample a real-time graphical plot of absorption is provided as the instrument database logs raw and processed spectral data to the storage drives on its onboard Windows computer. A GPS interface provides position data logged with each sample.



**Mechanical:**

Weight (in air) 13 Kg  
 Avg. Current, sampling 600 ma  
 Current (sleep mode) .01 ma  
 Footprint 1340 sq. cm

**Electrical:**

Voltage 10-16vdc

PARAMETER	MOTE CDOM MAPPER	UNITS
DYNAMIC RANGE, ABSORBANCE UNITS	.001 - 2.4	AU
DYNAMIC RANGE, ABSORPTION	0.004 - 11.1*	1/m
WAVELENGTH RANGE	350-850	nm
WAVELENGTH RESOLUTION	2.76	nm, FWHM
NOISE, PK-PK (SENSITIVITY)	0.01	mAU
DRIFT	<.01/AUTO-REFERENCE CYCLE	mAU
OPTICAL PATH LENGTHS	50 *	CM
SAMPLE CELL INSIDE DIAMETER	2	MM
I/O OPTICAL FIBER DIAMETER	600	MICROMETRE
SHIPPING WEIGHT	27	LB.
FOOTPRINT	1340	SQ. CM
AUTOMATIC, UNTENDED OPERATION	YES	
SELF-CLEANING	YES	
SELF-CALIBRATING (INTEGRATION TIME, REFERENCE & SAMPLE TEMPERATURE AND SALINITY)	YES	
GEO-REFERENCED DATA	YES	
SOLVENT RESISTANCE	YES	
INTEGATED INTO A SINGLE, SMALL PACKAGE	YES	
LOW COST	YES	
* FOR THE CDOM MAPPER, ALTERNATE CELL PATHLENGTHS ARE AVAILABLE TO EXTEND DYNAMIC RANGE		

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