



Alkalinity Sensor

In-Situ Monitoring of Total Alkalinity

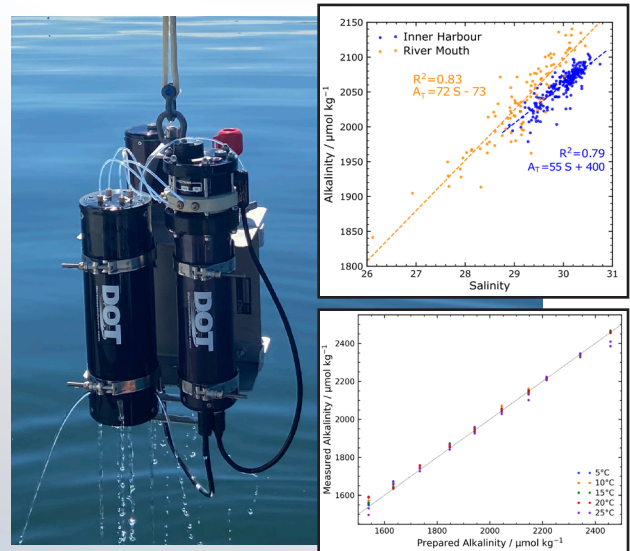


Dartmouth Ocean Technologies introduces a miniaturized, autonomous alkalinity sensor for marine environments that will enable Ocean Alkalinity Enhancement (OAE) and monitor the ocean's buffering capacity

Alkalinity Sensor

Features at a Glance:

- Accurate measurement of microfluidic alkalinity over the range 1500-2600 $\mu\text{mol} / \text{kg}$
- Measurement calibrations against certified reference materials
- Programmable sample rate and concentration range
- Technology Flexibility: An excellent contender for towed systems, un-crewed vehicles, gliders, ROVs, Voluntary Observation Ships, buoys, and profiling floats
- Customizable and configurable to fit into most platforms



Alkalinity Sensor - In-Situ Monitoring of Total Alkalinity



Features

- Alkalinity Sensor
- Rigid Reagent Housing
- Self-Contained
- 300 samples / 30 standards per reagent load*
- Programmable sample interval & range
- Easy transport and deployment
- Flexible mounting configurations



Options

- Optional power from platform or battery pack
- Dual- and Tri-case mounting brackets



Specifications			
Weight		Dimensions:	Sensor: Reagent:
- In Air	5.0 kg (11.0 lbs)	- Diameter	114.3 mm (4.5 in) 139.7 mm (5.5 in)
- In Salt Water	2.2 kg (4.8 lbs)	- Length	508 mm (20 in) 400 mm (15.75 in)
Sample Rate:	3 samples per hour (programmable)**	Depth Rating:	20 m (65 ft)
		Temp Range:	4-35 °C
Intake Filter:	0.45µm pore size (default)	Power Draw:	Sleep: 0.23W / Idle: 0.9W / Peak: 1W
Reagents:	<ul style="list-style-type: none"> • Reagents: 0.01 mol/kg HCl with 20 µmol/kg bromocresol green indicating dye • Standards: Prepared Na₂CO₃ solution or certified reference material 	Data Output:	<ul style="list-style-type: none"> • Ethernet file upload/download • RS232 115200 baud 8N1 (programming)
Concentration Range:	<ul style="list-style-type: none"> • 1500-2600 µmol/kg (default) • Programmable to different ranges in situ 	Options:	<ul style="list-style-type: none"> • Mounting brackets • Software visualization • Real time data output • External battery case (Lithium Primary) • Rigid, floodable reagent case
Precision:	15 µmol/kg		

* Based on current reagent volumes of 500 ml titrant & 250 ml standard ** Standard sample processing time is currently 20 minutes per sample



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