



# Alkalinity Sensor

## In-Situ Monitoring of Total Alkalinity

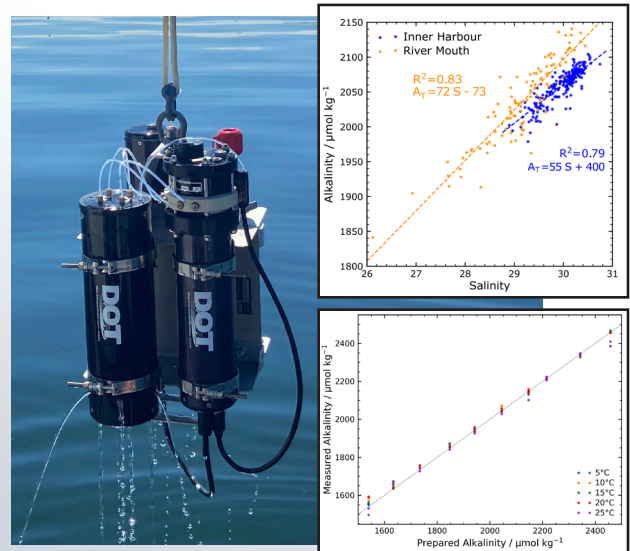


Dartmouth Ocean Technologies introduces a miniaturized, autonomous alkalinity sensor for marine environments that will enable Ocean Alkalinity Enhancement (OAE) and monitor the ocean's buffering capacity

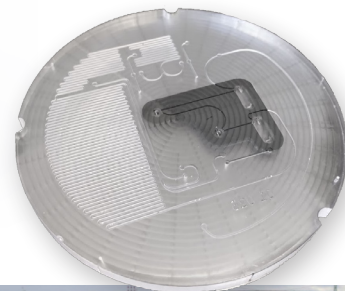
### Alkalinity Sensor

#### Features at a Glance:

- Accurate measurement of microfluidic alkalinity over the range 1500-2500  $\mu\text{mol} / \text{kg}$
- 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
- 275 samples / 25 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			
<b>Weight</b>		<b>Dimensions:</b>	Sensor:                      Reagent:
- In Air	5.0 kg (11.0 lbs)	- Diameter	89 mm (3.5 in)              111 mm (4.4 in)
- In Salt Water	1.8 kg (4.0 lbs)	- Length	442 mm (17.4 in)          349 mm (13.8 in)
<b>Sample Rate:</b>	1 sample every 20 minutes to 1 sample per day (programmable)**	<b>Depth Rating:</b>	200 m (656 ft)
<b>Intake Filter:</b>	25mm - 0.45µm pore size (default)	<b>Temp Range:</b>	5-25 ° C
<b>Reagents:</b>	<ul style="list-style-type: none"> <li>• <i>Reagents:</i> 0.01 mol/kg HCl with 20 µmol/kg bromocresol green indicating dye</li> <li>• <i>Standards:</i> Prepared Na<sub>2</sub>CO<sub>3</sub> solution or certified reference material</li> </ul>	<b>Power Draw:</b>	1 W (typ) to 10 W (max)***
<b>Concentration Range:</b>	<ul style="list-style-type: none"> <li>• 1500-2500 µmol/kg (default)</li> <li>• Programmable to different ranges in situ</li> </ul>	<b>Data Output:</b>	• Ethernet, RS232
<b>Precision:</b>	16 µmol/kg	<b>Options:</b>	<ul style="list-style-type: none"> <li>• Mounting brackets</li> <li>• Software visualization</li> <li>• Real time data output</li> <li>• External battery case (Lithium Primary)</li> <li>• Rigid, floodable reagent case</li> </ul>

\* Based on current reagent volumes of 500 ml titrant & 250 ml standard \*\* Standard sample processing time is currently 20 minutes per sample  
 \*\*\* Total number of samples processed will depend on sampling frequency; each measurement consumes about 4.4 kJ of battery energy



25 Parker Street, Suite 202  
 Dartmouth, Nova Scotia  
 Canada B2Y 4T5  
 sales@dartmouthocean.com  
 DartmouthOcean.com