

<b>Infrastructure (short name)</b>	POSEIDON Observatory (POSEIDON)	
<b>Installation (short name)</b>	POSEIDON CALIBRATION LABORATORY (POSEIDON CAL)	
<b>Location</b>	Eastern Mediterranean Sea-Crete	
<b>Legal name of organization</b>	Hellenic Center for Marine Research HCMR	
<b>Location of organization</b>	Athens GREECE	
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<b>Description</b>															
The calibration facilities at the HCMR Thalassocosmos complex in Crete include a fully equipped laboratory with a special designed large calibration tank, two smaller glass tanks and a number of reference sensors and equipment for temperature, salinity, chlorophyll-a, turbidity and dissolved oxygen sensors calibration.															
<b>Service offered</b>															
The TNA offered by the POSEIDON system to the project includes: Calibration laboratory: It can be used for calibration of sensors (temperature, salinity, chl-a, turbidity, dissolved oxygen).The support team consists of the HCMR technicians and scientists who regularly prepare the instrumentation, perform field experiments, service and maintain the instruments and assist the users during the experiments in the calibration facility. <b>Field experiments:</b> Calibrated sensors can be tested in the field.															
<b>Instruments/Sensors</b>															
Reference Sensors and Instruments															
<table border="1"> <thead> <tr> <th>Instrument</th> <th>Measured Parameter</th> <th>Range</th> <th>Accuracy</th> <th>Resolution</th> </tr> </thead> <tbody> <tr> <td>Deep Ocean Standards Thermometer SBE 35</td> <td>Temperature (ITS-90)</td> <td>-5 to +35 °C</td> <td>0.001 °C</td> <td>0.000025 °C</td> </tr> <tr> <td>AutoSal 8400A</td> <td>Conductivity Ratio (Salinity)</td> <td>0.005 to 42 ppt</td> <td>0.003 ppt</td> <td>0.0002 ppt</td> </tr> </tbody> </table>	Instrument	Measured Parameter	Range	Accuracy	Resolution	Deep Ocean Standards Thermometer SBE 35	Temperature (ITS-90)	-5 to +35 °C	0.001 °C	0.000025 °C	AutoSal 8400A	Conductivity Ratio (Salinity)	0.005 to 42 ppt	0.003 ppt	0.0002 ppt
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Furthermore a variety of sensors (Seabird 37 SIP, Aanderaa 3919B, Aanderaa 3975) are used in order to monitor the measurement parameters inside the calibration tanks during the experiments. For the calibration of the DO sensors samples are collected during the experiment and analyzed later using the Winkler methodology. Regarding fluorometer and turbidity sensor the sensors are calibrated against known concentrations and particles dimensions of reference solutions.

#### **Additional service/data**

#### **Discrete samplings for long-term series**

Parallel to the calibration laboratory HCMR operates a fixed observatory (M3A) where a large number of parameters are monitored (3h – real time). In addition, during monthly visits, in situ samplings are also performed.

#### **Special owner rules**

Requests for calibration services must be made at least 1 month in advance.  
The user should provide the measured parameters range of the area where the sensors will be deployed.  
The calibration lab of HCMR DOES NOT use formazin for turbidity sensors calibration.