Infrastructure (short name)	CNR-Marine Platforms and Laboratories (CNR-MPL)	
Installation (short name)	CNR Calibration facility Capo Granitola (MPLCAL7)	
Locations	Mediterranean Sea, Sicily (Strait of Sicily)	
Legal name of organization	Consiglio Nazionale delle Ricerche (CNR)	
Location of organization	Rome, Italy	
Contact	Mario Sprovieri, mario.sprovieri@iamc.cnr.it Institute for Coastal Marine Environment, National Research Council (IAMC-CNR) Via del Mare, 3 Torretta Granitola 91021 Fraz. Campobello di Mazara, TP, Italy Phone: +39 0924 40670 - Fax: +39 0924 40445	
Web site address	http://www.iamc.cnr.it	

Description

The laboratory for geochemical analyses of the CNR-IAMC of Capo Granitola (Sicily) is directly and intensively involved in the study of biogeochemical cycles related to major (nitrogen, phosphorus and silicon) and trace (Cd, Pb, Co, Ni, Cu, Ag, Mo, Al, Mn, Fe) elements in the marine environment. The research activity makes part of a number of national and international research projects (JERICO, VECTOR, SESAME, PERSEUS, COST Action, ITN programs, etc.). A significant part of the analytical and research activities is focused on the determination of dissolved and particulate inorganic and organic nutrients (NO_3, NO_2, NH_4, SiO_2 and PO_4), particulate organic carbon (TOC), trace elements (dissolved and particulate phases), carbon (dissolved an particulate) and oxygen isotopes in seawater. Calibration of fluorescence probes for chlorophyll estimation is also possible at the CNR-IAMC of Capo Granitola labs, by Liquid chromatography equipped with spettrofluorimetric detectors

Laboratory methods currently available for these parameters are listed as follows. Lab facilities for handling samples and preparation according to international reference procedures are available. All analytical methods are set for high precision – low blank analyses to be suitable for oceanographic purposes. These measurements have already been applied both in eutrophic coastal zones and oligotrophic offshore waters. Ultrapure laboratory water is available to be used for these analyses.

NO_3, NO_2, NH_4, SiO_2, PO_4: flow-segmented autoanalyzer method with Brän–Luebbe autoanalyzer (QUAATTRO).
TOC: Element analyser (ThermoElectron)
Trace elements: HR-ICP-MS (ThermoElectron)
$\delta^{13}C$, $\delta^{18}O$: GasBenchII and Delta Plus XP (ThermoElectron)
High performance liquid chromatography (HPLC) equipped with spectrofluorimetric detector and UV/VIS detector.

Service offered

The laboratory of geochemistry in Sicily (MPLCAL6) is available for validation and assessment of long term performances of chemical sensors by application analytical methods to discrete

seawater samples. The comparison between sensor performance and reference chemical methods can be done during experiments in situ, as well as during microcosm incubation in controlled ambient conditions.

The service described above can be provided by a dedicated team or directly accessed by the JERICO user with the assistance of this team. The assistance team is formed by one technician and one head scientist for each laboratory. The results will be directly accessible to the user in case of direct access, or remotely accessible in case the operations are conducted by the operator on user demand.

Instruments/Sensors

Parameter	Method	Instruments
Chlorophyll	Liquid-chromatography	HPLC- with (UV-VIS, and Spectrofluorimetric detectors
Nutrients	Spectrophotometry	Brän–Luebbe autoanalyzer (QUAATTRO)
TOC	Gas-chromatography	EA-ThermoElectron
Trace elements	Mass spectrometry	HR-ICP-MS
$\delta^{13}C$,$\delta^{18}O$	Mass spectrometry	GasBenchII, Delta Plus XP

Special owner rules

During access to the laboratory for experimental activities, the ground rules of CNR for external visitors will be applied.