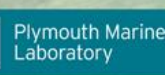


WEPAL-QUASIMEME quest for quality

18-20 March 2025

## Workshop Quality Assurance for Inorganic Carbon Measurements

*Ocean Acidification & Marine CO<sub>2</sub> Removal Technologies*



# **FINAL Agenda for the Workshop on Quality Assurance for Inorganic Carbon System Measurements in context of Ocean Acidification Monitoring & Marine CO<sub>2</sub> Removal Technologies**

18-20 March 2025

NOC – National Oceanography Centre, Southampton, UK

**A poster exhibition room will be available. Poster discussions will occur during the breaks.**

### **The Organizing Committee:**

Marc Knockaert (RBINS)

Sue Hartman (NOC)

Helen Findlay (PML, GOA-ON)

Célia Bento (Wepal-Quasimeme, WUR)

Koen Parmentier (RBINS)

Amy Kenworthy (PML, GOA-ON)

Steven Crum (Wepal-Quasimeme)

<b>Timetable</b>	<b>Tuesday 18 March 2025</b>
	<b>WEPAL-QUASIMEME INTERCALIBRATION Chair Koen Parmentier</b>
<b>9:30-10:00 AM</b>	<b>Registration</b>
10:00 -10:15	Welcome by NOC + housekeeping (Jon Blower and Susan Hartman)
10:15 -10:30	Presentation 1: Introduction to Wepal-Quasimeme Quality assurance and Quality assessment (W-Q Representative Célia Bento)
10:30 – 11:00	Presentation 2: AQ15 – Results of 4 years intercalibration exercises for TA and DIC (Koen Parmentier)
11:00 – 11:30	Coffee Break + Poster session
11:30 - 12:00	Presentation 3: The results of the 2017 interlaboratory comparison (Andrew Dickson)
12:00 - 12:30	Round table discussion/questions Future intercalibration exercises/needs/evaluation/ ... Chair Koen Parmentier + Marc Knockaert
12:30 – 13:30	Lunch + Poster
	<b>Scientific output - why measure TA DIC pH pCO<sub>2</sub> - needs of the scientific world; which data; which quality; uncertainties</b> <b>Chair Helen Findlay</b>
13:30 – 13:50	Presentation 4: OSPAR - QSR Ocean Acidification (Helen Findlay)
13:50 – 14:10	Presentation 5: Federated Database for Ocean Carbon Data: Update on global efforts for metadata and data naming conventions (Kirstin Isensee or Katherina Schoo)
14:10 – 14:30	Presentation 6: Uncertainty analysis and the MINKE ILC on pH (Florence Salvetat)
14:30 - 14:50	Presentation 7: Uncertainty quantification of Total Alkalinity and pHT measurement results and their propagation to other variables of the carbonate system (Gaëlle Capitaine)
14:50 – 15:10	Presentation 8: Solving the marine carbonate system (Matthew Humphreys)
15:10 – 15:40	Coffee Break + Posters
	<b>Obtaining consistent approach to analysing samples - use of CRMs, for calibration and quality control</b> <b>Chair: Susan Hartman</b>
15:40 – 16:00	Presentation 9: Advancing calibration practices for total dissolved inorganic carbon measurements in seawater (Maribel I. García-Ibáñez)
16:00 – 16:20	Presentation 10: Progress for a European hub for Carbon-CRMs and Production of in-house RM for DIC/TA (Tobias Steinhoff and Maribel I. García-Ibáñez)
16:20 – 16:40	Presentation 11: The optimal use of our RMs to assist in the quality control of seawater CO <sub>2</sub> measurements (Andrew Dickson)
16:40 – 17:00	Presentation 12: Validation and suitability of the analysis TA/DIC/pH on a SKALAR autoanalyzer for coastal waters (Marc Knockaert)
17:00-17:10	Wrap up, closure of the day Koen Parmentier/Susan Hartman
<b>19:30</b>	<b>Dinner Evening 1</b>

<b>Wednesday 19 March 2025</b>	
8:45 – 8:50	Introduction of Day 2 By Marc Knockaert
	<p style="text-align: center;"><b>Instrument Session and Laboratory tours</b></p> <p style="text-align: center;">SKALAR (Luc Uytterhoeven) – 494/12  4H-JENA HydroFIA (Nadja Kinski) – One Ocean Suite  Apollo/Vindta (Anita Flohr) – 256/38  Lab on chip systems (Socrates Loucaides &amp; Emily Hammermeister) – 011/02</p>
8:50 – 9:10	<p style="text-align: center;">Intro session</p> <p style="text-align: center;">Short intro company SKALAR (10 min) (Luc Uytterhoeven)  Short intro company 4H-JENA HydroFIA (10 min) (Nadja Kinski)</p>
9:10 – 10:10	Rotation 1
10:10 – 10:25	Short Coffee Break
10:25 – 11:25	Rotation 2
11:25 – 12:25	Rotation 3
12:25 – 13:25	Lunch + Posters
13:25 – 14:25	Rotation 4
14:25 – 14:40	Short Coffee Break
	<p style="text-align: center;"><b>Obtaining consistent approaches to sampling, sample pre-treatment  sample storage, good laboratory practice.</b></p> <p style="text-align: center;"><b>Chairs: Marc Knockaert / Koen Parmentier</b></p>
14:40 – 14:50	<p style="text-align: center;">Intro session</p> <p style="text-align: center;">Break out groups + rotation</p> <p style="text-align: center;">Item 1: Sampling, sample handling, sample bottles, sampling storage  (chair Susan – Co-chair Matthew)</p> <p style="text-align: center;">Item 2: Analysis methods (procedures, guidelines, preparation of reagents)  and calibration (use of Na<sub>2</sub>CO<sub>3</sub>) – (Chair Maribel – Co-chair Marc)</p> <p style="text-align: center;">Item 3: CRM (production, use, alternatives, ...)  (Chair Koen – co-Chair Tobias)</p> <p style="text-align: center;">Item 4: Validation, calculation of uncertainties, ... accuracy, precision  (Chair Florence – Co-Chair Gaëlle)</p>
14:50 – 15:30	Rotation 1
15:30 – 16:10	Rotation 2
16:10 – 16:50	Rotation 3
16:50 – 17:30	Rotation 4
17:30 – 18:20	Wrap - up (max 10 minutes/item) + Plenary Discussion Koen P. + Chairs
18:20 – 18:30	Closure of the day by Marc Knockaert
<b>19:30</b>	<b>Dinner Evening 2</b>

<b>Thursday 20 March 2025</b>	
	<b>New (adapted analysis) methods, techniques, &amp; sensors Chair: Socratis Loucaides</b>
9:00 - 9:20	Presentation 13: Coherent spectrophotometric pH measurements: the purified and unpurified m-cresol purple dilemma (Marta Álvarez)
9:20 – 9:40	Presentation 14: Applications of models to the calibration of the total pH scale using Tris buffers: improving its accuracy, converting to free pH, and calculating the effects of pressure.(Simon L. Clegg)
9:40 – 10:00	Presentation 15: Measuring TA - upgrading the VINDTA system; this is ongoing (Tobias Steinhoff)
10:00 – 10:20	Presentation 16: Automating laboratory DIC/TA measurements for high frequency sampling (Gavin Sim)
10:20 – 10:50	Coffee Break + poster session
10:50 – 11:20	Presentation 17: New techniques, sensors (Socrates Loucaides)
11:20 – 11:50	Presentation 18: Intercalibration ICOS pCO <sub>2</sub> sensors (Tobias Steinhoff)
11:50 – 12:30	Plenary Final Discussion about sensors (Socratis Loucaides)
<b>12:30 – 13:00</b>	<b>Closure of the Workshop (Koen Parmentier)</b>

**Poster Sessions:** these sessions will be planned once we know the number of participants who wish to submit a poster session. For specific questions on analytical issues please send them to the WEPAL-QUASIMEME Office prior to the workshop, together with your registration, so that we can include those in the discussion sessions at the Workshop.

In addition to the aforementioned presentations there will be ample time for discussions and exchange of information between delegates. For further questions on the programme, contact the WEPAL-QUASIMEME Office ([wepalquasimeme@wur.nl](mailto:wepalquasimeme@wur.nl)).