

IUPAC Project Progress Report

Date: 10 July 2007

Task Group Leader: Maria Filomena Camões

Project number: 2004-005-2-500

Project Title: Comparable pH measurements by metrological traceability

Series Titles: pH Measurements in Complex Matrices
Part I - pH Measurements in water quality monitoring and assessment;
Part II- pH Measurements of clinical, biochemical and environmental relevance

Report:

1. Current status of project:

- In progress
- A small Project Meeting (M Filomena Camões, Hans Bühler, Michal Mariassy, Günther Meinrath, Petra Spitzer) took place in Lisbon, on the 5th February 2007, associated with the participation of some WG Members in the MetChem/Euromet-Eurachem Technical Committee.
- Communication continues by email

2. Progress relative to 'milestones':

- Recommendations for water (various types) quality monitoring and assessment are behind schedule
- Issues concerning measurements of clinical and biochemical relevance have only slightly being approached

3. Difficulties encountered (or concerns):

Apart from the general work overload of WG Members, some situations contributed to significant delay of the planned activities, namely:

- The Coordinator's pH Primary Laboratory has been transferred from the University of Lisbon to IPQ, the portuguese NMI. The process of transfer and testing is taking time and effort.
- Cédric Rivier, from LNE/France has changed jobs and is no longer engaged in the Project. His colleague Labarraque Guillaume [Guillaume.Labarraque@lne.fr] will be in charge, working with Rachel Champion who will return after 1st March 2007; contacts (**M Filomena Camões**) have been made to ensure collaboration and to acknowledge and incorporate Cedric's previous work.
- Involvement of some of us, particularly Petra Spitzer in projects concerning traceability of salinity measurements

4. Projected completion date (documents ready for external review):

Owing to the reported delays, extension of the project is requested for an additional 12 months, i.e. until the beginning of January 2009.

5. Please list all of the intended outputs and the dissemination plan for this project (viz. articles, CD, conference presentations; etc.). These may have been expanded since project approval:

In the frame of the Project's objectives the Members of the Group produced various publications, among which are:

- "Effect of Condensation Phenomena in Potentiometric Measurements"
M.J.G.H.M.Lito, M. Filomena Camões; Catarina M. Viçoso, ACA, 575 (2006) 45-51

- "Traceability of pH in a Metrological Context"

Meinrath Günther, Camoes MF, Spitzer Petra..

Proceedings APAT/IUPAC Workshop "Combining and Reporting Analytical Results"

Royal Society of Chemistry, Ed.A. Fajgelj, M. Belli and U Sansone December 2006

- Guidelines for potentiometric measurements in suspensions Part A. The suspension effect

Srecko F.Oman, M.Filomena Camões, Kipton J.Powell, Raj Rajagopalan, Petra Spitzer

Pure Appl. Chem. 79(1), 67-79, 2007

- Guidelines for potentiometric measurements in suspensions Part B. Guidelines for Practical

pH measurements in soil suspensions

Srecko F.Oman, M.Filomena Camões, Kipton J.Powell, Raj Rajagopalan, Petra Spitzer

Pure Appl. Chem. 79(1), 81-86, 2007

- Improving the Quality of Potentiometric PpH Measurements.

M.J.G.H.M.Lito, M. Filomena Camões; Catarina M. Viçoso

AQUAL -DOI: 10.1007/s00769-007-0296

- Intention of Truth, Objectivity and Metrology

Günther Meinrath

ACQUAL340R1

The list of ongoing actions/documents is the following:

A-Estimation and experimental issues concerning liquid junctions-**H Buehler**

B-A revolution in Analytical Chemistry-**G Meinrath** (splitt in two:

LABO/glassware oriented and ANAL CHEM/how standard pH values are obtained)

C-Questionnaire on pH measurement in industry and field applications- **MF**

Camões/"LNE"

D-How to Measure pH- **MF Camões**

E-The Book **All you need to know about pH**

The date of 30th of June had been agreed for authors to send in drafts of their chapters;

a balance is being done of the state of the art

F- Oral Presentation at Conferences e.g. IUPAC Congress, 2007, and others to come.

6. If your project is within 6 months of completion, how do you plan to utilise any remaining budget for this project?

The remaining budget is intended, as initially planned and approved, and in a way similar to what has been happening until now, for support of the organisation of Group meetings and scientific meetings attendance/registration, where the activities of the project are presented and discussed.

7. Work on this project may have identified new problems, issues, challenges, emerging topics, opportunities for related projects, etc. Please indicate these here so that the Division can follow up on them:

Upgrading of salinity measurements, seawater composition vs. climatic changes