

NORMAN Collaborative Trial

Detection and quantification of polar compounds by means of chromatography
(quantitatively and qualitatively)



Background:

The number of polar organic compounds encountered in the environment is increasing. For this reason in 2015 the “1st NORMAN workshop on analysis of problematic compounds” was organised in Rhodes (<http://www.norman-network.net/?q=node/218>). As a result of the discussions at the end of the workshop, the wish was expressed to organise a collaborative trial. The purpose of this trial is to compare the different analytical techniques used in various laboratories within the NORMAN network and beyond. This trial will contribute to evaluate the techniques that are currently used and detect the assets and drawbacks of each method.

For this trial about 20 environmentally-relevant compounds were chosen. The list was compiled by KWR, the TU Munich and the University of Athens. Different concentrations of these compounds will be added to a surface water sample. The spiked surface water samples will be sent to all participating laboratories. Laboratories are invited to use their in-house methods to analyse the samples and these in-house methods will not be subject to restrictions. The samples should then be analysed qualitatively and quantitatively. If a quantitative analysis is not possible, an exclusively qualitative analysis is also possible. The data should be reported in an Excel template that will be sent to the participants. The qualitative analysis will be done by TUM. KWR will interpret the quantitative analysis data. Each laboratory will be informed in a short report of its own performance compared to the other laboratories (data will be anonymised). Participation is free of charge. Costs for the analysis of the samples will be borne by the participating laboratories. If the wish is expressed, a one-day workshop will be organised in 2017 to discuss the experience gained with this trial and the implications of the obtained results.

Objectives:

The two main objectives of this Collaborative Trial are:

- 1. Quantitative compounds: Identification and quantification.**
- 2. Qualitative compounds: Identification and reporting the retention times as well as the analytical method details (column, solvents, etc.)**

Further instructions on how to report the data will be provided later.

The Collaborative Trial should provide in-depth information on the methodologies used by participating laboratories. It will be the first interlaboratory study of this kind and therefore it will be possible to envisage the presentation of the results in a common publication in a prestigious refereed journal.

Registration:

Please register before the **5th of August 2016** by sending an email to

Patrick.bauerlein@kwrwater.nl

and with the subject "**Registration Norman Interlab 2016**".

Time schedule:

Deadline for registration: **5th of August 2016**

Shipment of samples: **27th of September 2016**

Reporting of data by the labs: **28th of October 2016**

List of compounds:

Quantitative Analysis
cyanoguanidine
sucralose
betaine
vigabatrin
cotinine
oxycodone
arginine
arprinocid
imidocarb
iohexol
salbutamol
cetirizine
5-Fluoro Cytosine
metformin
guanylurea
benzocaine
melamine
hexamethylenetetramine (urotropine)
diethanolamine

Qualitative analysis
L-asparagine
trimethyl-(2-prop-2-enoyloxyethyl)azanium
cyanoguanidine
sucralose
betaine
arginine
imidocarb
iohexol
5-fluoro cytosine
metformin
benzocaine
Melamine