

NORMAN Collaborative Trial

BIOASSAYS FOR GENOTOXICITY TESTING



Background

There are several *in vitro* bioassays available to test for genotoxic activity and related mechanisms. As one of the scientific activities of the NORMAN Joint Programme of Activities 2018 (WG-2), a collaborative trial to compare the performance of different bioassays for genotoxicity and related mechanisms is organised. NORMAN members and organisations outside the network will be invited to participate.

Objective

The aim of this study is to compare the performance of different bioassays for genotoxicity and related mechanisms for evaluation of chemical water quality. Water-relevant mixtures of micropollutants will be produced by KWR Watercycle Research Institute and sent to the participants. Different types of bioassays will be used by the participants to test these samples (blindly) in the assay(s) in use at their laboratories. The results will be evaluated by KWR and disseminated to the participants and the NORMAN network.

Time schedule

Deadline for registration	(KWR)	June 15th 2018
Preparation and distribution of samples	(KWR)	July 2018
Test results reported to KWR	(all participants)	November 2018
Dissemination of results	(KWR)	December 2018

Outline

Laboratories are invited to use their in-house methods to analyse the samples; these in-house methods will not be subject to restrictions. If your laboratory wishes to participate, the following procedure will be followed:

- You will receive four samples from KWR in July 2018: (i) a stock concentration of a model compound, (ii) a concentrated reconstituted mixture of micropollutants, (iii) a vial with solvent (used for preparation of the former two samples), and (iv) a representative polluted water sample. The samples can be frozen until analysis. We ask you to at least test the samples as delivered to you. You are welcome to additionally analyse dilutions or concentrated samples.
- Your laboratory will test the samples blindly using the genotoxicity assay(s) of your choice according to your own test protocols, including appropriate controls, and quality assurance procedures. Analysis and statistical evaluation of raw data should be performed by your

laboratory. No financial compensation will be provided for these analyses; an in kind contribution of your laboratory is requested to this end. Final test results need to be reported to KWR in November 2018 ultimately, using a standardized template that will be distributed by KWR.

- KWR will evaluate the results and disseminate them to the NORMAN network by December 2018.

We intend to evaluate *qualitatively* which bioassays are responsive to a representative set of water pollutants and may thus be suitable for water quality monitoring, not to *quantitatively* compare the performance of each testing procedure. Quality and validity of the test results will not be checked by KWR. The test results will be anonymized in the study report. Selected organisations outside of the NORMAN network will be invited to participate as well and will receive the study report upon participation. If you would like us to invite organisations from your own network, please let us know. We reserve the right to select participants (based on NORMAN membership and inclusion of the largest diversity of bioassays) or ask for a contribution to the shipping costs in case a number of organisations disproportionate to the budget would apply for participation.

Registration

Please register at your earliest convenience, at the latest on **June 15th**, by sending an email to Kirsten.Baken@kwrwater.nl.

We kindly ask you to include the following information in your application:

- We will apply the following assay(s):
- Our assay(s) requires the use of a specific solvent: **NO / YES**, i.e.:
- As a positive control we will use the following substance(s):
- The requested total volume per sample is (μ l):
- We are able to process waste water samples: **YES / NO**
- Our contact person for receipt of the samples is (name, email, telephone):
- Our delivery address is: