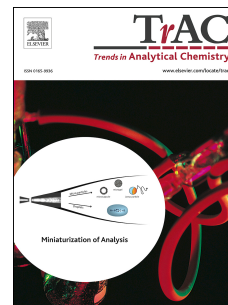


Accepted Manuscript



Effect-based and chemical analytical methods to monitor estrogens under the European Water Framework Directive

Sarah Könemann, Robert Kase, Eszter Simon, Kees Swart, Sebastian Buchinger, Michael Schlüsener, Henner Hollert, Beate I. Escher, Inge Werner, Selim Aït-Aïssa, Etienne Vermeirssen, Valeria Dulio, Sara Valsecchi, Stefano Polesello, Peter Behnisch, Barbora Javurkova, Olivier Perceval, Carolina Di Paolo, Daniel Olbrich, Eliska Sychrova, Rita Schlichting, Lomig Leborgne, Manfred Clara, Christoph Scheffknecht, Yves Marneffe, Carole Chalon, Petr Tušil, Přemysl Soldàn, Brigitte von Danwitz, Julia Schwaiger, Maria Isabel San Martín Becares, Francesca Bersani, Klara Hilscherová, Georg Reifferscheid, Thomas Ternes, Mario Carere

PII: S0165-9936(17)30433-8

DOI: [10.1016/j.trac.2018.02.008](https://doi.org/10.1016/j.trac.2018.02.008)

Reference: TRAC 15103

To appear in: *Trends in Analytical Chemistry*

Received Date: 31 October 2017

Revised Date: 15 February 2018

Accepted Date: 19 February 2018

Please cite this article as: S. Könemann, R. Kase, E. Simon, K. Swart, S. Buchinger, M. Schlüsener, H. Hollert, B.I. Escher, I. Werner, S. Aït-Aïssa, E. Vermeirssen, V. Dulio, S. Valsecchi, S. Polesello, P. Behnisch, B. Javurkova, O. Perceval, C. Di Paolo, D. Olbrich, E. Sychrova, R. Schlichting, L. Leborgne, M. Clara, C. Scheffknecht, Y. Marneffe, C. Chalon, P. Tušil, P. Soldàn, B. von Danwitz, J. Schwaiger, M.I. San Martín Becares, F. Bersani, K. Hilscherová, G. Reifferscheid, T. Ternes, M. Carere, Effect-based and chemical analytical methods to monitor estrogens under the European Water Framework Directive, *Trends in Analytical Chemistry* (2018), doi: 10.1016/j.trac.2018.02.008.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Effect-based and chemical analytical methods to monitor estrogens under the European Water Framework Directive

Sarah Könemann^{‡, a,b,*}, Robert Kase^{‡, b}, Eszter Simon^b, Kees Swart^c, Sebastian Buchinger^d, Michael Schlüsener^d, Henner Hollert^a, Beate I. Escher^{e,f}, Inge Werner^b, Selim Ait-Aïssa^g, Etienne Vermeirssen^b, Valeria Dulio^g, Sara Valsecchi^h, Stefano Polesello^h, Peter Behnisch^c, Barbora Javurkovaⁱ, Olivier Perceval^k, Carolina Di Paolo^a, Daniel Olbrich^b, Eliska Sychrovaⁱ, Rita Schlichting^e, Lomig Leborgne^l, Manfred Clara^m, Christoph Scheffknechtⁿ, Yves Marneffe^o, Carole Chalon^o, Petr Tužil^p, Přemysl Soldán^p, Brigitte von Danwitz^q, Julia Schwaiger^r, Maria Isabel San Martín Becares^s, Francesca Bersani^t, Klara Hilscherováⁱ, Georg Reifferscheid^d, Thomas Ternes^d, Mario Carere^u

^a Institute for Environmental Research, RWTH Aachen University, Worringerweg 1, 52074 Aachen, DE;

^b Swiss Centre for Applied Ecotoxicology Eawag-EPFL, Überlandstrasse 131, 8600 Dübendorf, CH;

^c BioDetection Systems b.v., Science Park 406, 1098 XH Amsterdam, NL;

^d Bundesanstalt für Gewässerkunde, Am Mainzer Tor 1, 56068 Koblenz, DE;

^e Helmholtz Centre for Environmental Research - UFZ, Permoserstrasse 15, 04318 Leipzig, DE;

^f Eberhard Karls University Tübingen, Environmental Toxicology, Center for Applied Geosciences, 72074 Tübingen, DE;

^g INERIS, Rue Jaques Taffanel, Parc Technologique ALATA, 60550 Verneuil-en-Halatte, FR;

^h Istituto di Ricerca sulle Acque, Via del Mulino 19, 20861 Brugherio (MB), IT;

ⁱ Masaryk University, Research Centre for Toxic Compounds in the Environment (RECETOX), Kamenice 753/5, 625 00 Brno, CZ;

^k French National Agency for Water and Aquatic Environments, 5 Square Felix Nadar, 94300 Vincennes, FR;

^l Agence de l'eau Adour-Garonne, 90 rue de Fétéra, CS 87801, 31078 Toulouse Cedex 4, FR;

^m Umweltbundesamt, Spittelauer Lände 5, 1090 Wien, AT;

ⁿ Umweltinstitut, Institut für Umwelt und Lebensmittelsicherheit des Landes Vorarlberg, Montfortstraße 4, 6901 Bregenz, AT;

^o Institut Scientifique de Service Public (ISSeP), Rue Chéra 200, 4000 Liège, BE;

^p T.G. Masaryk Water Research Institute, Podbabská 2582/30, Praha 6, 16000, CZ;

^q Landesamt für Natur, Umwelt und Verbraucherschutz NRW (LANUV), Auf dem Draap 25, 40221 Düsseldorf, DE;

^r Bayerisches Landesamt für Umwelt, Demollstrasse 32, 82407 Wielenbach, DE;

^s Instituto de Recursos Naturales, Universidad de León, Avenida de Portugal 42, 24071 León, ES;

^t Centro Ricerche (SMAT), Società Metropolitana Acque Torino S.p.A.C. so Unità d'Italia 235/3, 10127 Torino, IT;

^{u,*} National Institute of Health, Department Environment and Health, Roma, IT;

[‡]Authors contributed equally to this manuscript.

*Corresponding author:

Sarah Könemann

Institute for Environmental Research, RWTH Aachen University

Worringerweg 1, 52074 Aachen, Germany

Tel.: +41587655254

E-mail: sarah.koenemann@rwth-aachen.de

Detailed description of the authors contributions can be found in the Supplementary Information (SI, Table S1).

Download English Version:

<https://daneshyari.com/en/article/7687753>

Download Persian Version:

<https://daneshyari.com/article/7687753>

[Daneshyari.com](https://daneshyari.com)