

Accepted Manuscript

Title: Unprecedented sensitivity of the planar yeast estrogen screen by using a spray-on technology

Authors: Andreas Schoenborn, Pascal Schmid, Sarah Bräm, Georg Reifferscheid, Marina Ohlig, Sebastian Buchinger



PII: S0021-9673(17)31642-4
DOI: <https://doi.org/10.1016/j.chroma.2017.11.009>
Reference: CHROMA 358992

To appear in: *Journal of Chromatography A*

Received date: 30-8-2017
Revised date: 4-11-2017
Accepted date: 6-11-2017

Please cite this article as: Andreas Schoenborn, Pascal Schmid, Sarah Bräm, Georg Reifferscheid, Marina Ohlig, Sebastian Buchinger, Unprecedented sensitivity of the planar yeast estrogen screen by using a spray-on technology, *Journal of Chromatography A* <https://doi.org/10.1016/j.chroma.2017.11.009>

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.

Unprecedented sensitivity of the planar Yeast Estrogen Screen by using a spray-on technology

Andreas Schoenborn¹, Pascal Schmid¹, Sarah Bräm¹, Georg Reifferscheid², Marina Ohlig², Sebastian Buchinger²

¹ *ZHAW Life Sciences und Facility Management, Grüental, 8820 Wädenswil, Switzerland*

² *Federal Institute of Hydrology, Am Mainzer Tor 1, D-56068 Koblenz, Germany*

Corresponding author:

Andreas Schoenborn
Phone: +41589345810
email: sand@zhaw.ch

Highlights

- A new spray-on method for applying yeast cells to HPTLC plates was developed
- The method leads to a much higher sensitivity of the planar Yeast Estrogen Screen
- High quality estrogenicity profiles of wastewater can be characterized reproducibly
- The improved sensitivity opens the stage for direct testing of native water samples

Summary

The planar Yeast Estrogen Screen (p-YES) can serve as a highly valuable and sensitive screening tool for the detection of estrogenic compounds in various sample matrices such as water and wastewater, personal care products and foodstuff. The method combines the separation of sample constituents by thin layer chromatography with the direct detection of estrogenic compounds on the surface of the HPTLC-plate. The previous protocol using the immersion of a normal phase silica HPTLC-plate in a cell suspension for bio-autography resulted in blurred signals due to the accelerated diffusion of compounds on the wet surface

Download English Version:

<https://daneshyari.com/en/article/7609366>

Download Persian Version:

<https://daneshyari.com/article/7609366>

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