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

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## 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