

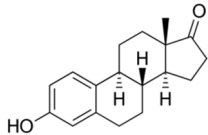
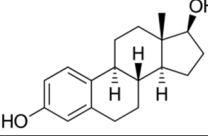
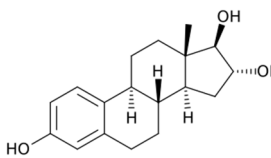
Molecularly imprinted polymers and magnetic molecularly imprinted polymers for selective determination of estrogens in water by ESI-MS/FAPA-MS

Maria Guć ^{1*} and Grzegorz Schroeder ¹

¹ Faculty of Chemistry, Adam Mickiewicz University in Poznań, Uniwersytetu Poznańskiego 8, 61-614 Poznań, Poland; maria.guc@amu.edu.pl, schroede@amu.edu.pl

* Correspondence: maria.guc@amu.edu.pl

Table 1. Physicochemical properties of natural steroidal estrogens.

Name and symbol	Structural formula	Molecular formula	Molecular weight [g mol ⁻¹]	Water solubility [mg L ⁻¹] in 25°C	Melting point [°C]
Estron (E1)		C ₁₈ H ₂₂ O ₂	270.37	0.8-30.00	260
Estradiol (E2)		C ₁₈ H ₂₄ O ₂	272.38	1.51-12.96	178
Estriol (E3)		C ₁₈ H ₂₄ O ₃	288.38	1.38-27.34	282

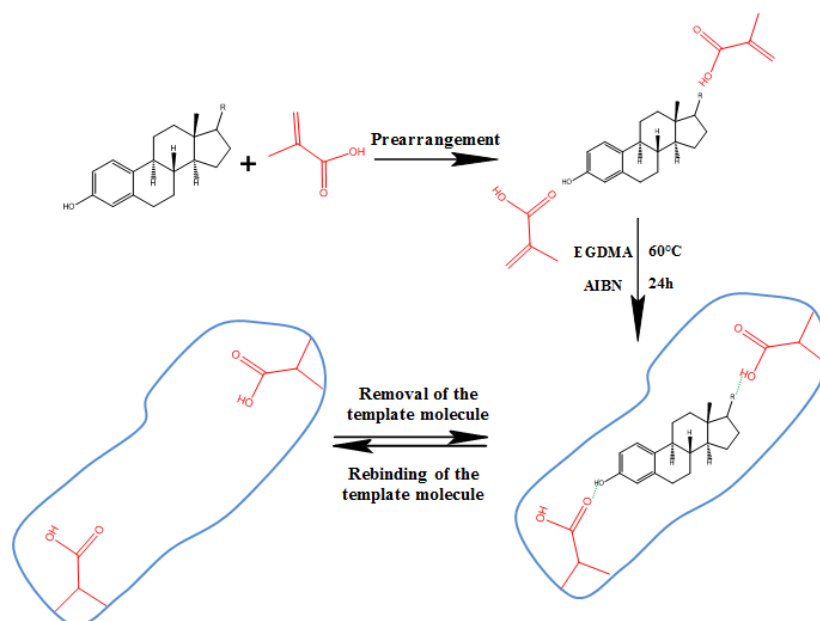
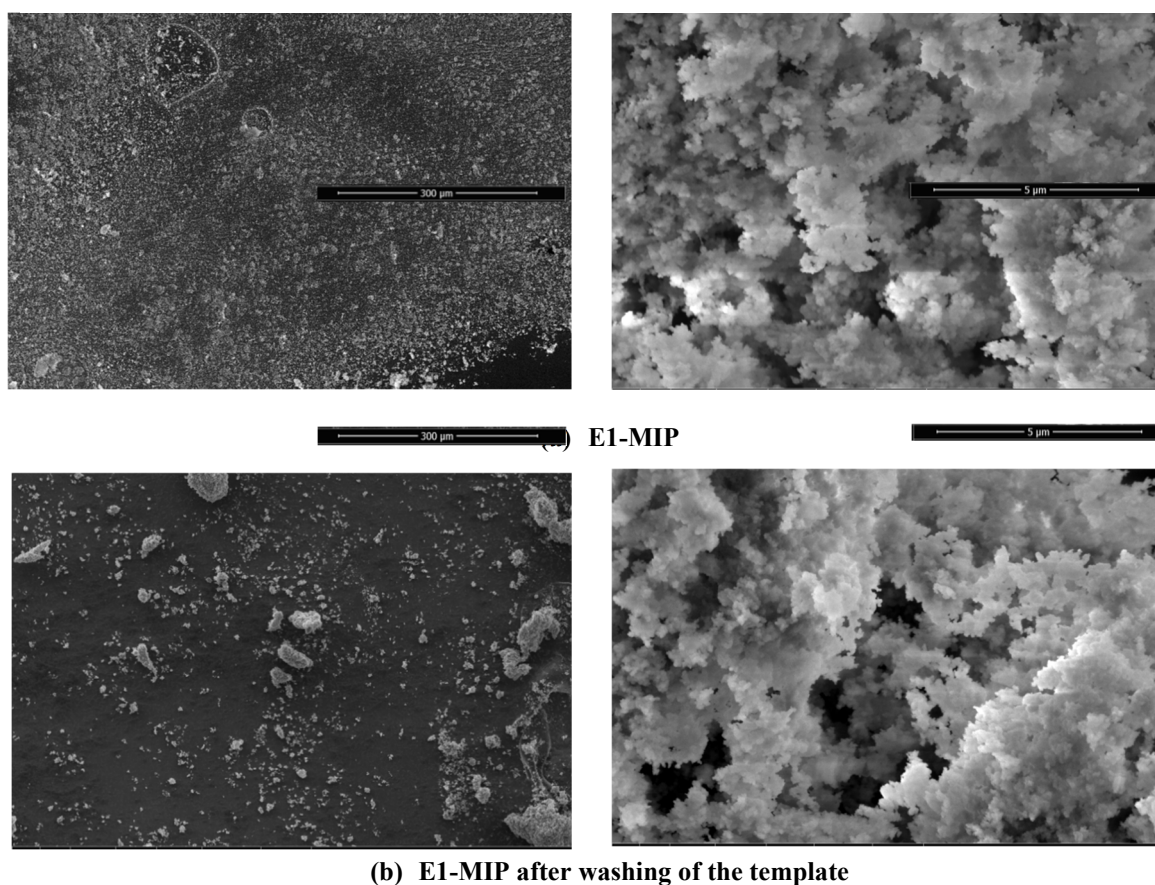
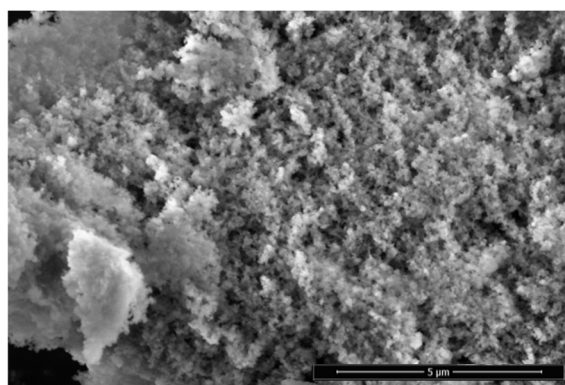
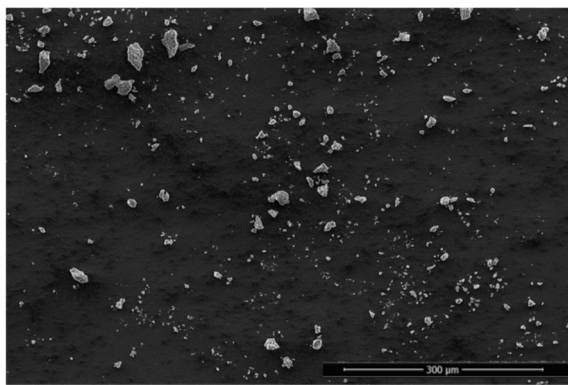
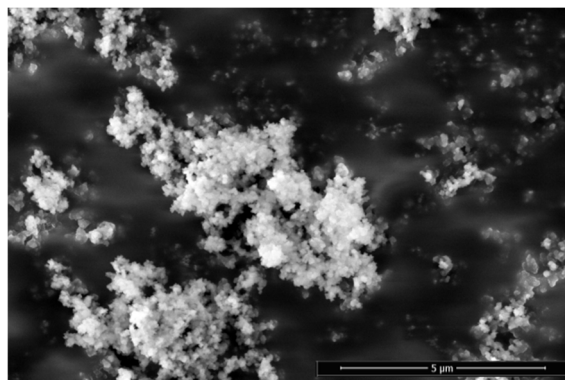
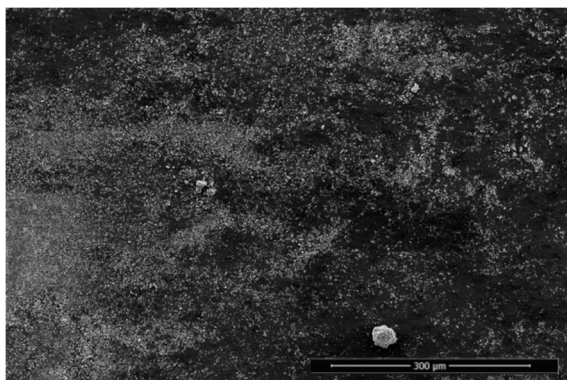


Figure S1. The steps for the preparation of estrogens (R = O or OH) molecularly imprinted polymers.

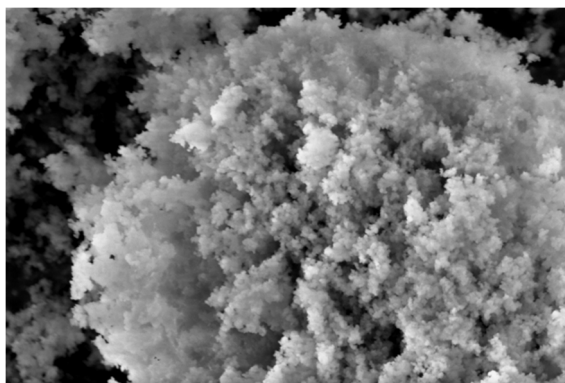
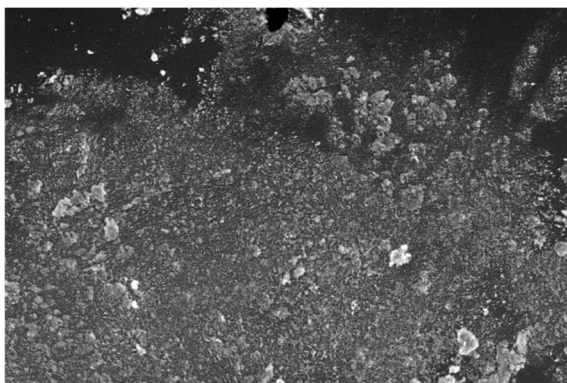




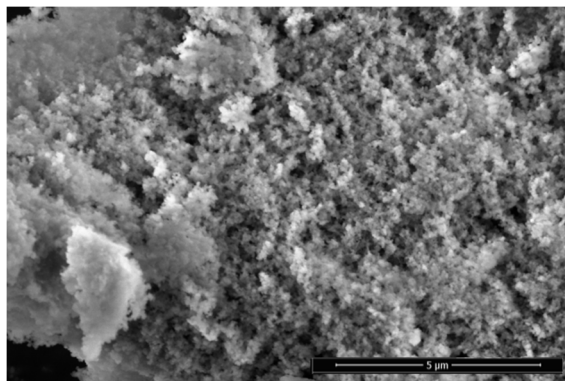
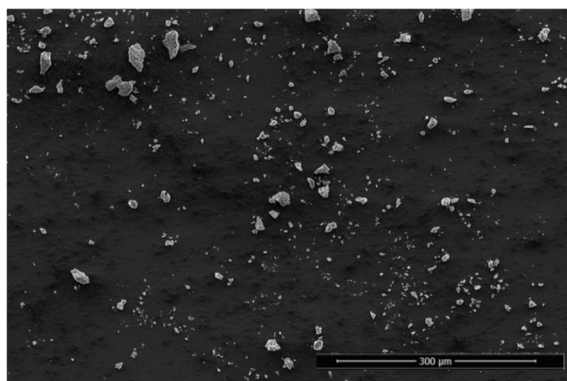
(c) E1-NIP



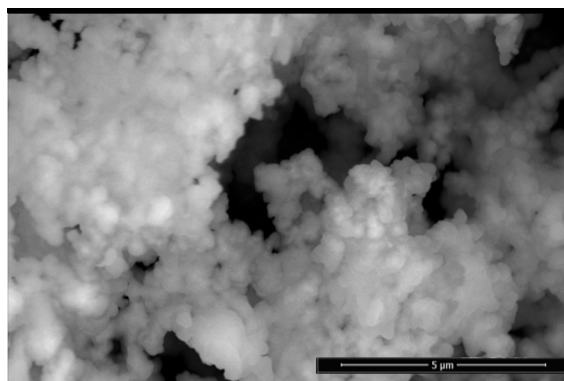
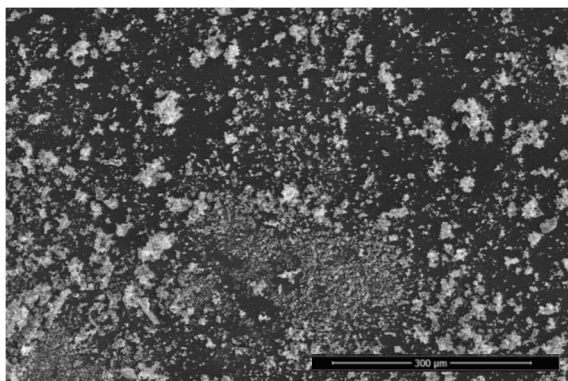
(d) E2-MIP



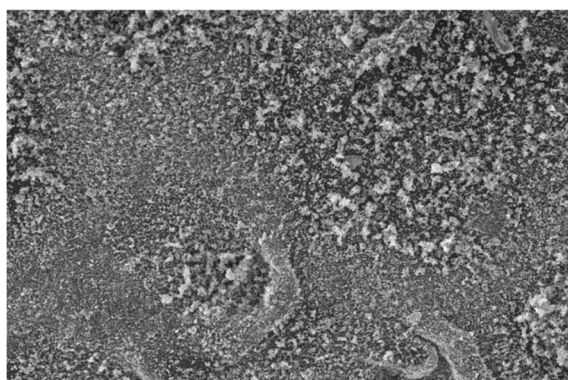
(e) E2-MIP after washing of the template



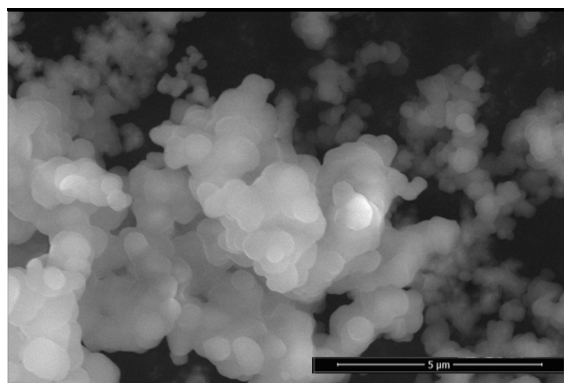
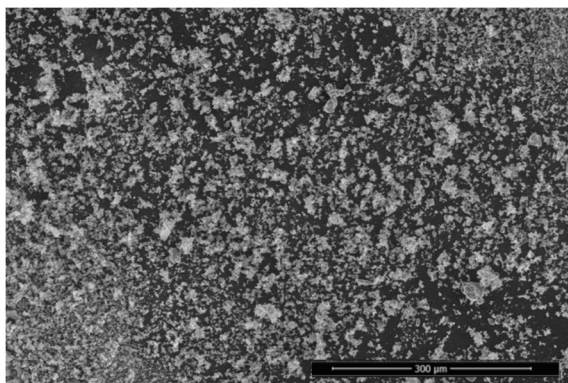
(f) E2-NIP



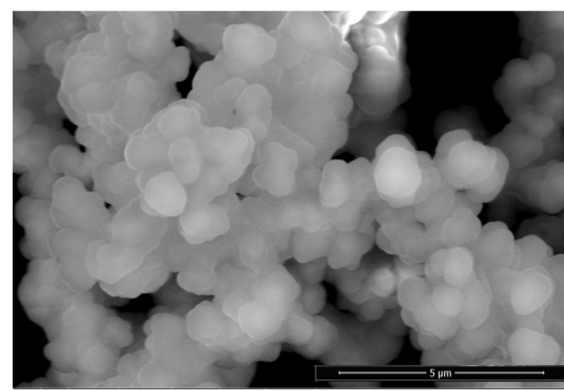
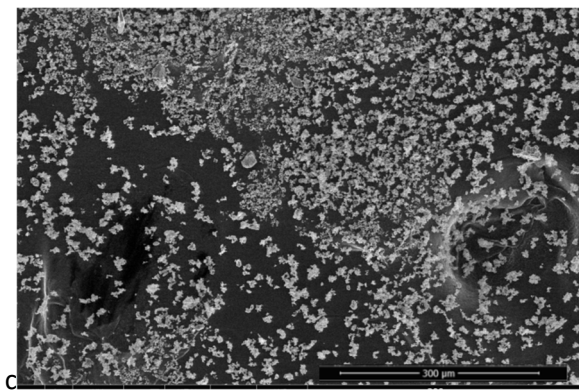
(g) E1-mag-MIP



(h) E1-mag-MIP after washing of the template



(i) E1-mag-NIP



C

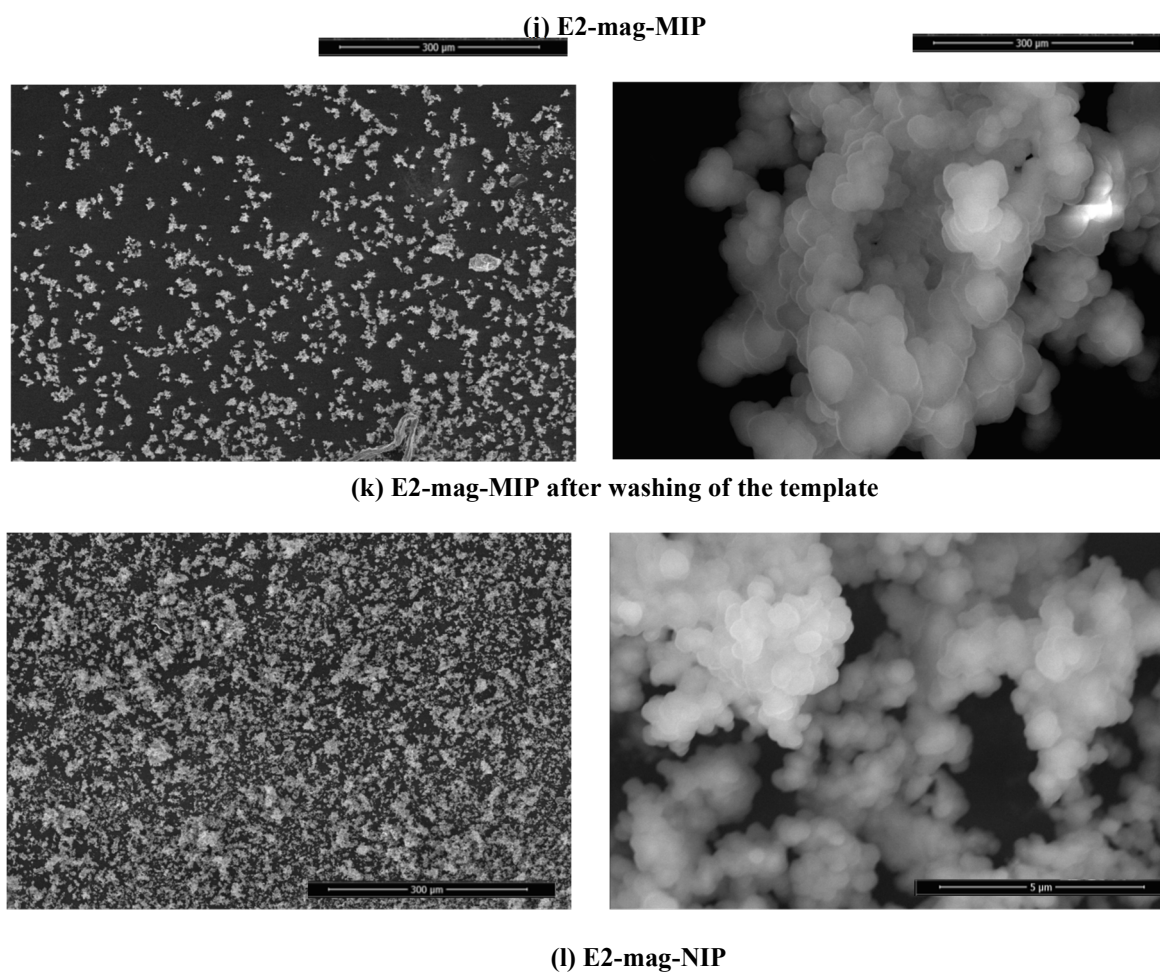


Figure S2. SEM images of the obtained polymers.

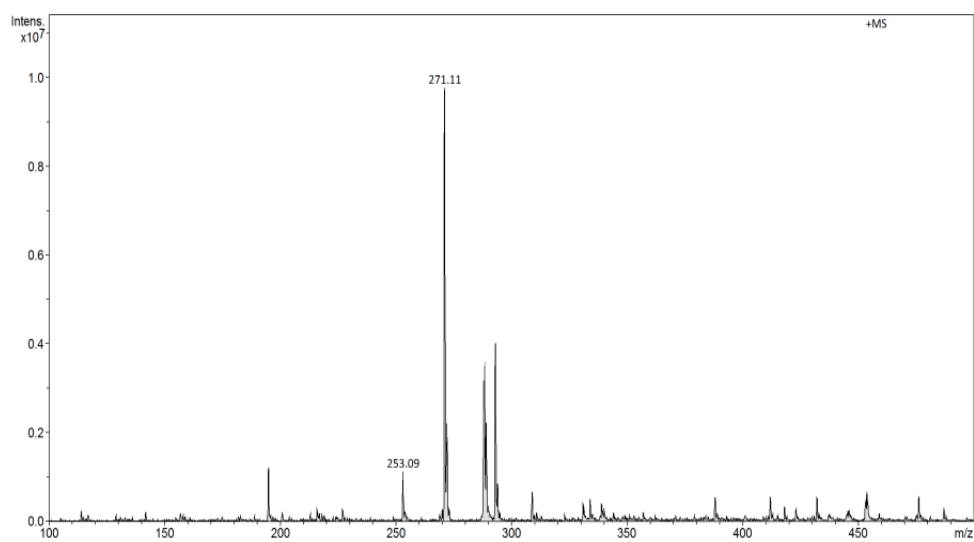


Figure S3. ESI-MS (positive ions) spectrum of E1.

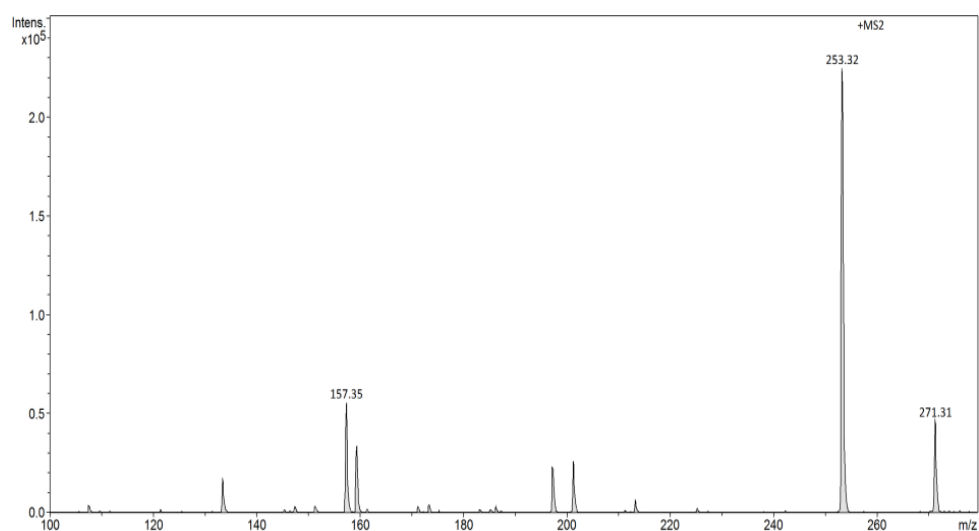


Figure S4. Fragmentation spectrum of the m/z 271 ion observed in E1.

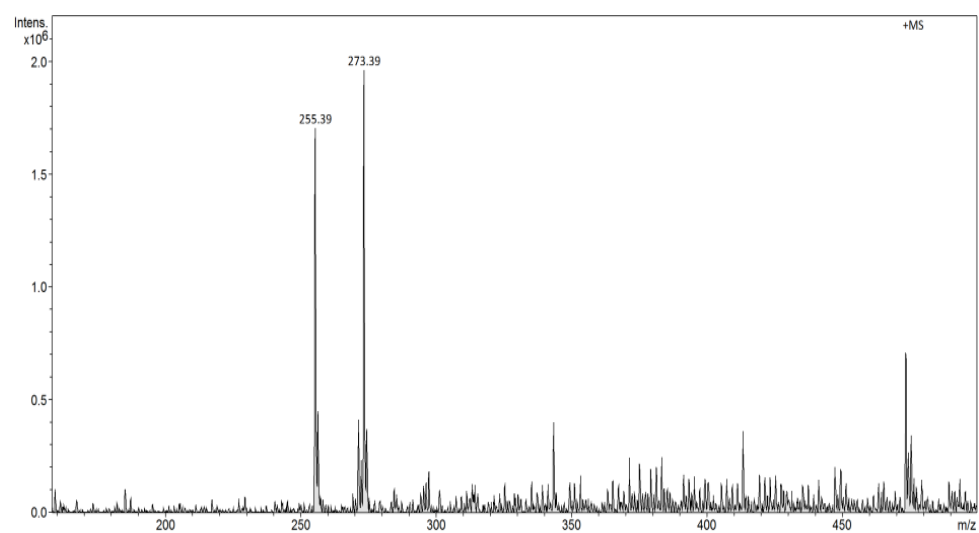


Figure 5. ESI-MS (positive ions) spectrum of E2.

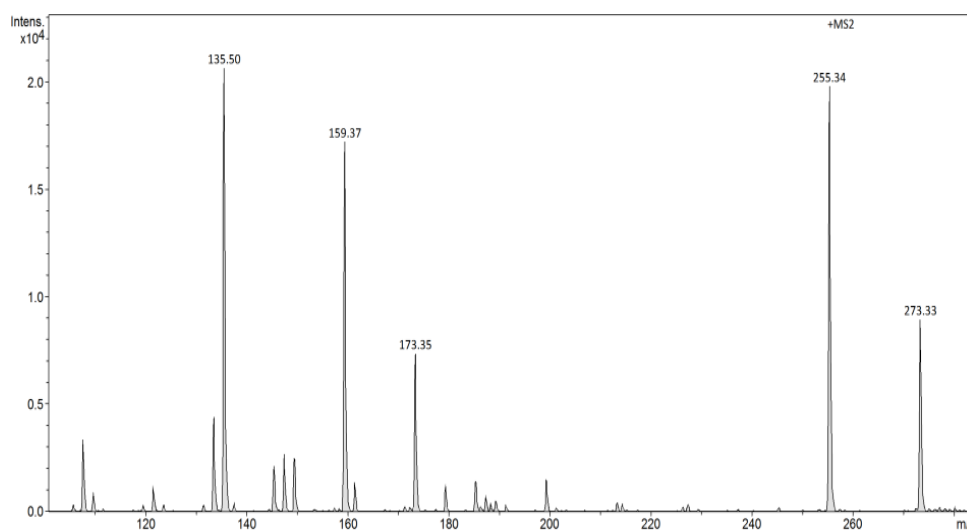


Figure S6. Fragmentation spectrum of the m/z 273 ion observed in E2.

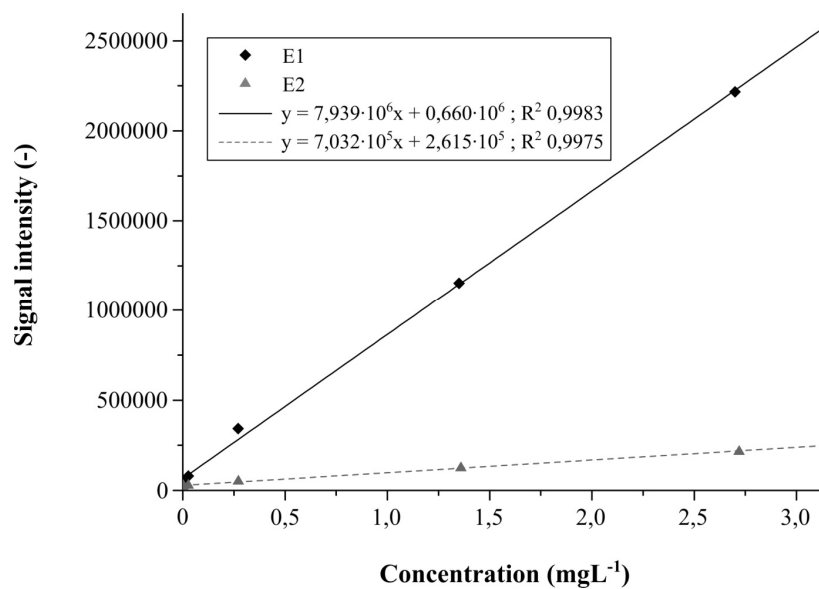


Figure S7. Dependence of signal intensity vs. estrogens concentration in the sample.