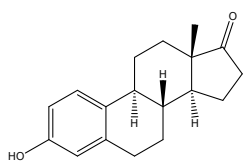
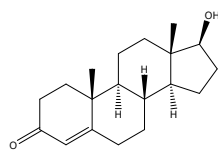


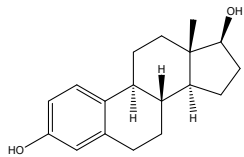
### Steroid sex hormones



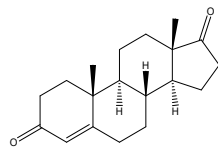
Estrone (E1)



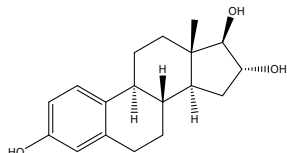
Testosterone (T)



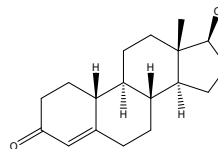
17β-Estradiol (17β-E2)



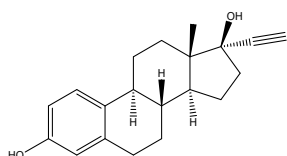
4-Androstene-3,17-dione (AND)



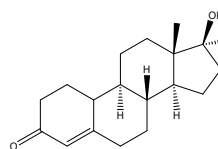
Estriol (E3)



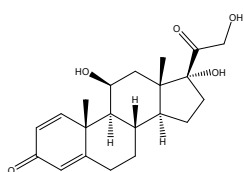
Nandrolone (NAN)



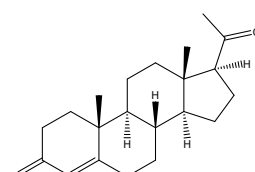
Ethinylestradiol (EE2)



17α-Methyltestosterone (17α-MT)

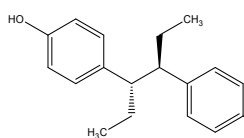


Prednisolone (PRED)

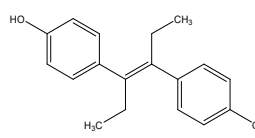


Progesterone (P)

### Non steroid hormones

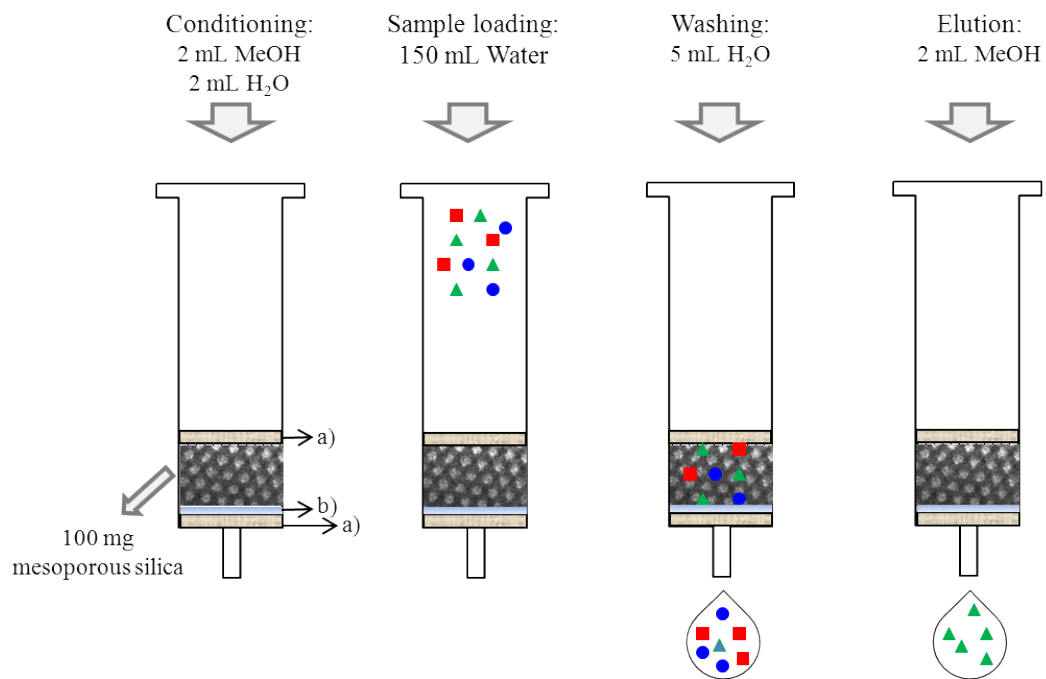


Hexestrol (HEX)



Diethylstilbestrol (DES)

**Fig. A1.** Chemical structure of selected endocrine disruptors.

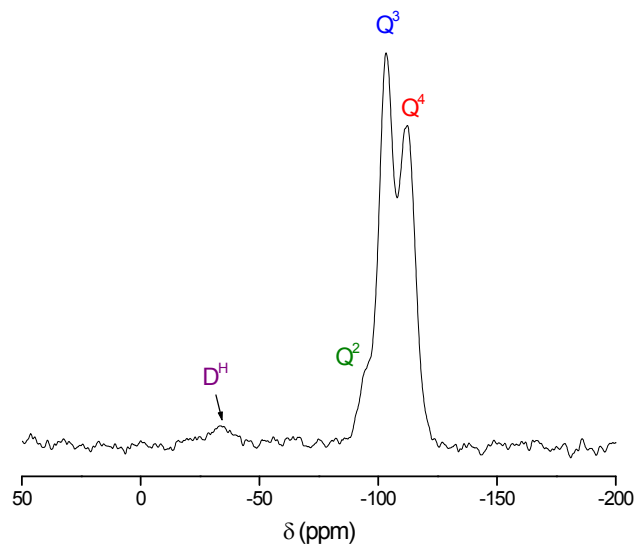


**Fig. A2.** Scheme of SPE procedure: a) PTFE disks, b) nylon filter membrane.

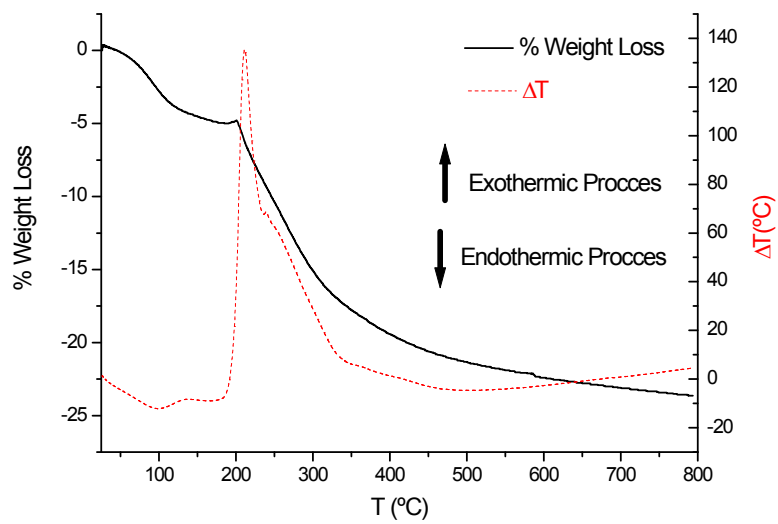
**Table A1.** Characterization data for mesoporous silicas

Material	BET surface (m <sup>2</sup> g <sup>-1</sup> )	Pore volume (cm <sup>3</sup> g <sup>-1</sup> )	Pore diameter (Å)	L <sub>0</sub> C <sub>18</sub> <sup>a</sup> (mmol C <sub>18</sub> g <sup>-1</sup> )	Particle morphology	Average particle size (length x wide)
SBA-15-C <sub>18</sub>	796	0.88	76	0.69	Cylindrical	1.4 μm x 750 nm

<sup>a</sup> Amount of octadecyl groups per gram of silica



**Fig. A3.**  $^{29}\text{Si}$  NMR spectrum of SBA-15-C<sub>18</sub>.



**Fig. A4.** Termogravimetric curve and heat flow of SBA-15-C<sub>18</sub>.

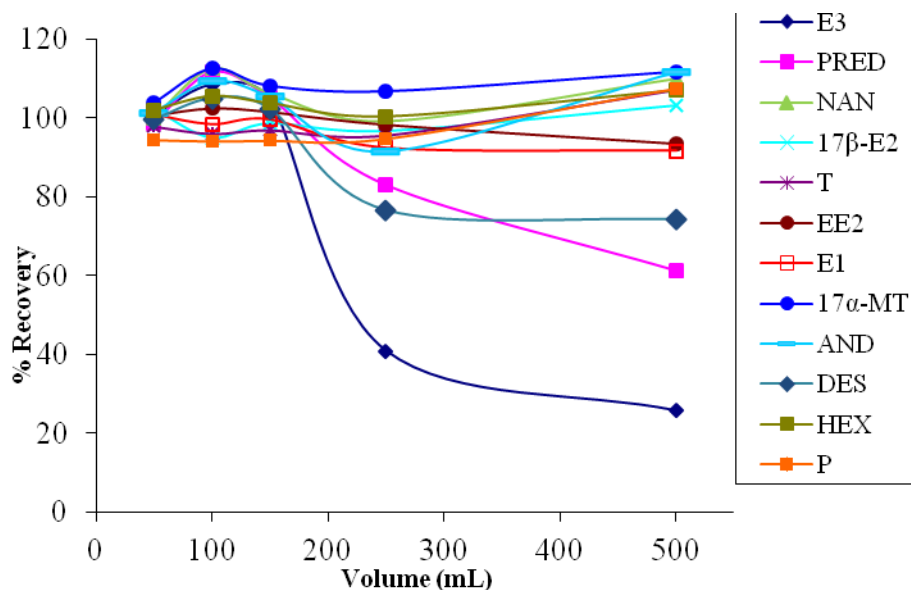
**Table A2.** Comparison of the recovery percentages obtained from the analysis ( $n = 3$ ) of 50 mL of spiked Milli-Q water extracted with SPE cartridges packed with 100 mg of mesoporous silica.

Analytes <sup>a)</sup>	A <sup>b)</sup>	B <sup>c)</sup>
Estriol (E3)	104 ± 1	100 ± 1
Prednisolone (PRED)	102 ± 1	99 ± 2
Nandrolone (NAN)	105 ± 3	100 ± 1
17β-Estradiol (17β-E2)	111 ± 1	102 ± 1
Testosterone (T)	108 ± 2	98 ± 4
Ethinylestradiol (EE2)	109 ± 5	100 ± 3
Estrone (E1)	104 ± 4	100 ± 4
17α-Methyltestosterone (17α-MT)	102 ± 4	103 ± 5
4-androstene-3,17-dione (AND)	103 ± 3	101 ± 7
Diethylstilbestrol (DES)	89 ± 1	100 ± 8
Hexestrol (HEX)	106 ± 2	101 ± 8
Progesterone (P)	105 ± 3	94 ± 7

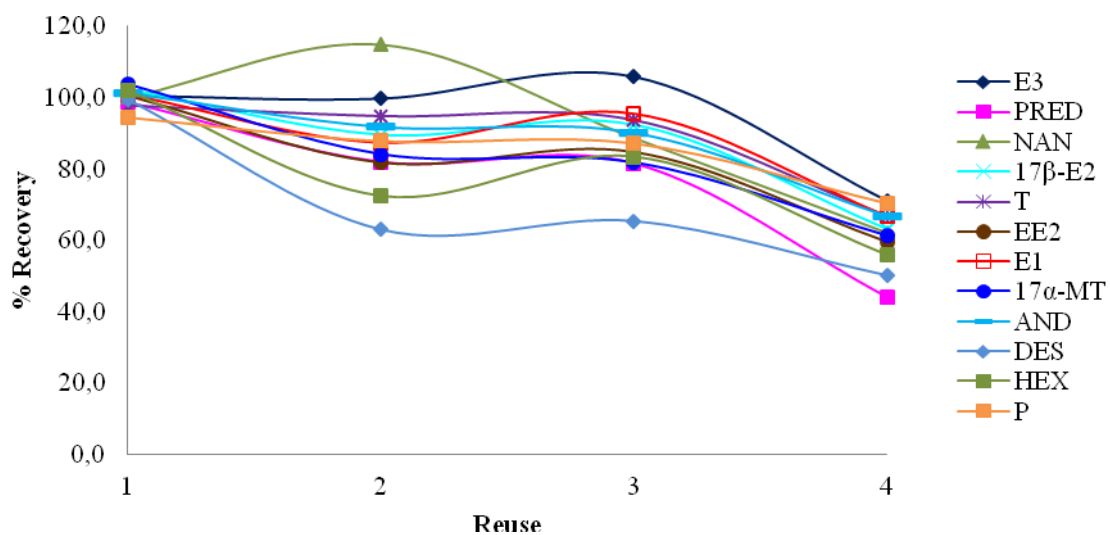
<sup>a</sup> Spiking level: 450 µg/L

<sup>b</sup> Conditioning: 3 x 2 mL methanol and 3 x 5 mL water; washing: 3 x 5 mL water; elution: 3 x 2 mL methanol.

<sup>c</sup> Conditioning: 2 mL methanol and 2 mL water; washing: 5 mL water; elution: 2 mL methanol (optimized conditions)



**Fig. A5.** Recoveries curves versus sample volume obtained from the off-line SPE analysis of Milli-Q water spiked with a mixture of the analytes extracted with SPE cartridges packed with SBA-15-C<sub>18</sub>. Estriol (E3), prednisolone (PRED), nandrolone (NAN), 17β-estradiol (17β-E2), testosterone (T), ethinylestradiol (EE2), estrone (E1), 17α-methyltestosterone (17α-MT), 4-androstene-3,17-dione (AND), diethylstilbestrol (DES), hexestrol (HEX) and progesterone (P).



**Fig. A6.** Reusability of the SPE cartridges packed with SBA-15-C<sub>18</sub>. Estriol (E3), prednisolone (PRED), nandrolone (NAN), 17 $\beta$ -estradiol (17 $\beta$ -E2), testosterone (T), ethinylestradiol (EE2), estrone (E1), 17 $\alpha$ -methyltestosterone (17 $\alpha$ -MT), 4-androstene-3,17-dione (AND), diethylstilbestrol (DES), hexestrol (HEX) and progesterone (P).