

Supplementary material

Rotating-disk sorptive extraction coupled to gas chromatography mass spectrometry for the determination of phthalates in bottled water

**Valentina Manzo^a, Mercedes Becerra-Herrera^{b*}, Daniel Arismendi^a, Alejandra Molina-
Balmaceda^a, Manuel A. Caraballo^{c,d}, Pablo Richter^{a*}.**

Corresponding authors:

Mercedes Becerra-Herrera, mercedes.becerra@uchile.cl;

Pablo Richter, prichter@ciq.uchile.cl ;

^a Department of Inorganic and Analytical Chemistry,
Faculty of Chemical and Pharmaceutical Sciences,
University of Chile, P.O. Box 233, Santiago, Chile.

^b Department of Chemistry, Faculty of Science,
University of Chile, P.O. Box 653, Santiago, Chile
Phones: +562 29787242; +562 29782968

Table A.1. Estimated concentration of phthalates in LC-MS grade water, ultrapure water and commercial glass bottled water samples.

Analyte	LC-MS water ($\mu\text{g L}^{-1}$)	ultrapure water ($\mu\text{g L}^{-1}$)	commercial glass bottled water ($\mu\text{g L}^{-1}$)
DMP	n.d.	0.041	n.d.
DEP	0.083	0.044	n.d.
DPP	n.d.	0.062	n.d.
DBP	0.034	0.004	0.011
BBP	n.d.	n.d.	n.d.
DEHA	0.008	0.002	n.d.
DEHP	0.132	0.149	0.043
DOP	n.d.	n.d.	n.d.

Table A.2. Doehlert design. The results obtained for phthalates

Experiment	Chromatographic areas							
	DMP	DEP	DPP	DBP	BBP	DEHA	DEHP	DOP
1	219042	394254	581926	1589265	282921	317553	1112291	750543
2	104388	162475	311432	882473	338708	409328	1221559	621216
3	319887	551546	665924	613248	178551	247348	856535	351702
4	35911	147123	183148	564540	70166	229489	687024	398154
5	61856	294502	198466	723183	103396	284440	958030	188595
6	63125	127396	200617	617658	66731	323153	919581	181888
7	62386	227802	333413	1536537	132788	463279	1319411	301436
8	51955	112621	169627	336627	146047	358819	1156381	267015

Table A.3. Phthalates concentrations in plastic bottled waters.

Analyte	Sample A		Sample B		
	Still water ($\mu\text{g L}^{-1}$)	Sparkling water ($\mu\text{g L}^{-1}$)	Still water ($\mu\text{g L}^{-1}$)	Sparkling water ($\mu\text{g L}^{-1}$)	Light sparkling water ($\mu\text{g L}^{-1}$)
DMP	n.d.	n.d.	n.d.	n.d.	n.d.
DEP	0.136 ± 0.022	0.843 ± 0.044	2.502 ± 0.952	2.731 ± 0.955	1.153 ± 0.011
DPP	n.d.	n.d.	n.d.	n.d.	n.d.
DBP	0.372 ± 0.010	0.353 ± 0.015	2.756 ± 0.233	0.746 ± 0.032	0.452 ± 0.092
BBP	n.d.	n.d.	n.d.	n.d.	n.d.
DEHA	0.365 ± 0.009	0.504 ± 0.008	0.261 ± 0.012	0.158 ± 0.023	n.d.
DEHP	1.258 ± 0.030	1.491 ± 0.017	1.302 ± 0.067	4.321 ± 0.050	2.243 ± 0.071
DOP	0.208 ± 0.002	0.182 ± 0.009	0.150 ± 0.002	0.015 ± 0.002	n.d.

n.d: not detected