Environmental Phenols by LC-MS/MS

ACE®
Ultra-inert
UHPLC & HPLC Columns

Application #AN4870

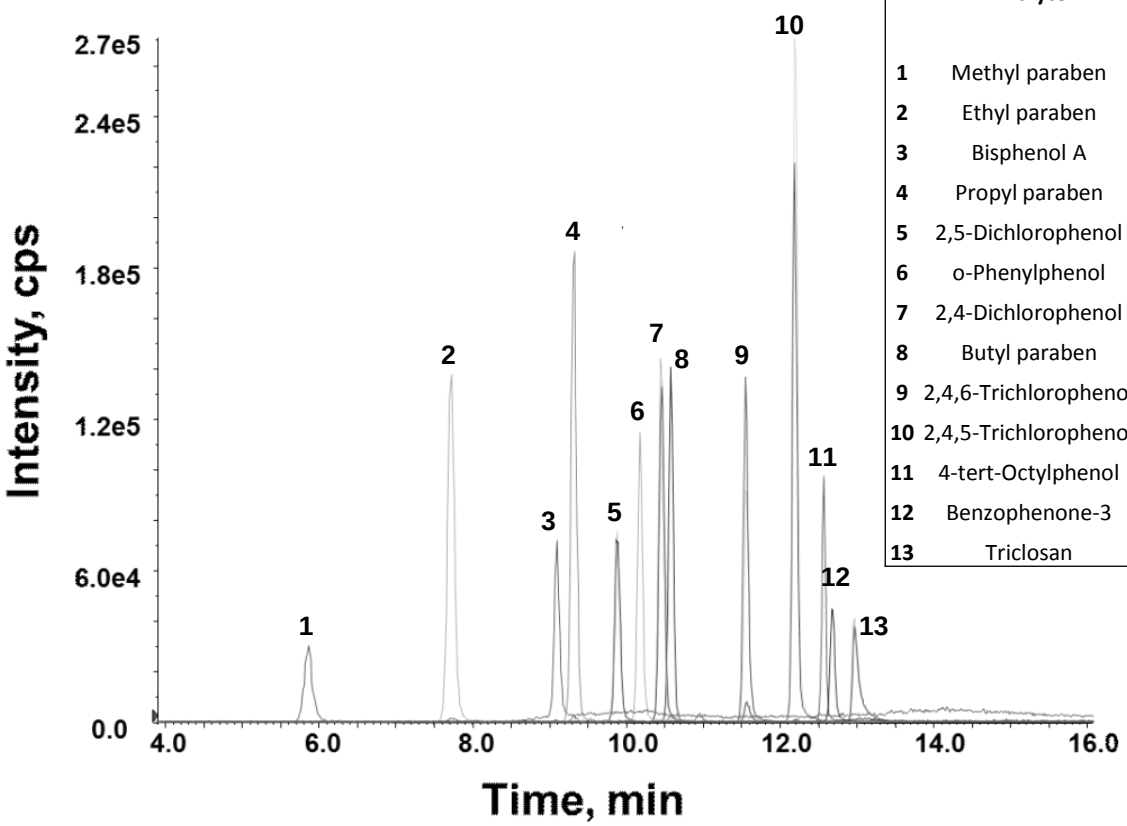
Conditions

Column:	ACE Excel 3 C18-PFP
Dimensions:	100 x 4.6 mm
Part Number:	EXL-1110-1046U
Mobile Phase:	A: H_2O
	B: MeOH

Time (mins)	%B
0	60
2	60
10	100
15	100
15.1	60

Flow Rate:	0.5 mL/min
Injection:	10 µL
Detection:	Sciex 5500 QTRAP MS
	APCI in negative MRM mode
	Curtain gas (N_2): 20psi, Heated ion source gas: 30psi,
	Heated gas temperature: 450ºC, Nebuliser current: -3.5µA

This method was developed to measure environmental phenols in human urine. Glucuronidated and sulphated metabolites were deconjugated by enzymatic hydrolysis and purified by SPE using C18 cartridges. The chromatogram below shows the separation of 13 phenols from a standard mixture in solvent.



	Analyte	Transitions (m/z)	
		Quantifier	Confirmatory
1	Methyl paraben	151 > 92	151 > 136
2	Ethyl paraben	165 > 92	165 > 137
3	Bisphenol A	227 > 133	227 > 212
4	Propyl paraben	176 > 92	179 > 136
5	2,5-Dichlorophenol	161 > 125	125 > 100
6	o-Phenylphenol	169 > 115	169 > 141
7	2,4-Dichlorophenol	161 > 125	163 > 125
8	Butyl paraben	193 > 92	193 > 136
9	2,4,6-Trichlorophenol	195 > 159	197 > 161
10	2,4,5-Trichlorophenol	195 > 159	197 > 161
11	4-tert-Octylphenol	205 > 133	n/a
12	Benzophenone-3	227 > 183	227 > 211
13	Triclosan	161 > 125	287 > 142

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