PHENOLS IN DRINKING WATER

HPLC METHOD

COLUMN:	Symmetry® C_8, 3.9mm x 150mm, 5µm
MOBILE PHASE A:	1% acetic acid in water
MOBILE PHASE B:	1 % acetic acid in acetonitrile
GRADIENT:	30% B initial, linear gradient to 100% B in 30 minutes
FLOW RATE:	1.2 mL/min
INJECTION VOLUME:	70 µL
DETECTION:	UV (0.02 AUFS)

OASIS® HLB EXTRACTION METHOD

Conditions for Oasis® HLB Cartridge, 3 cc, 60 mg
Part Number WAT094226

PREPARE SAMPLE: 75 mL sample, adjust to pH 2 with H_3PO_4

CONDITION: 3 mL 10:90 methanol/MTBE*

RISNSE: 2 mL methanol
RINSE: 2 mL H_2O

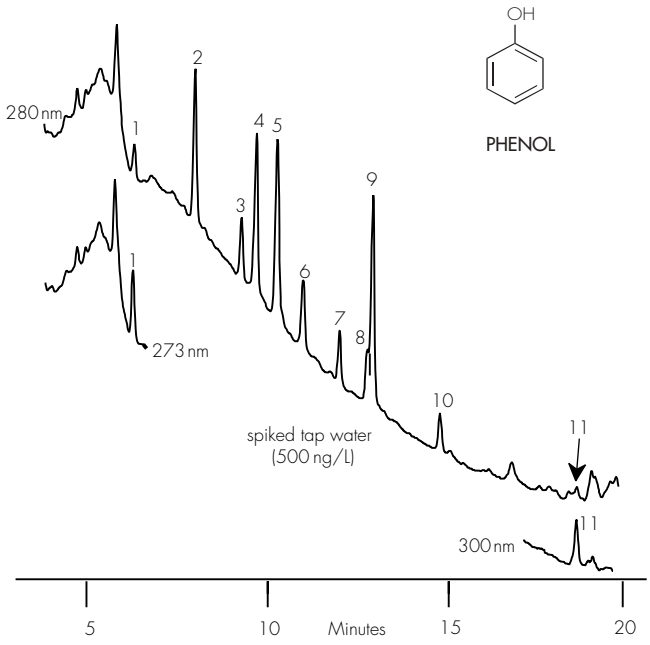
LOAD: 75 mL sample @ 4 mL/min

WASH: 1 mL H_2O

ELUTE: 2 mL 10:90 methanol/MTBE*

Evaporate to 0.2 mL
Reconstitute to 0.5 mL with H_2O

* methyl *t*-butyl ether
diethyl ether can be used as an alternative to MTBE



COMPOUNDS		% Recovery Tap Water 500 ng/L 5 replicates	% Recovery Tap Water 200 µg/L 5 replicates
1.	Phenol	98.8 (5.6)	99.7 (2.8)
2.	4-Nitrophenol	98.4 (1.2)	95.6 (3.6)
3.	2-Chlorophenol	89.2 (4.6)	93.2 (3.8)
4.	2-Nitrophenol	90.8 (6.1)	86.2 (4.4)
5.	2,4-Dinitrophenol	101 (3.7)	95.3 (2.0)
6.	2,4-Dimethylphenol	99.8 (3.9)	95.6 (3.4)
7.	4-Chloro-3-methylphenol	101 (5.7)	97.4 (3.6)
8.	2,4-Dichlorophenol	85.0 (5.5)	84.1 (10)
9.	4,6-Dinitro-2-methylphenol	91.5 (4.4)	94.2 (2.1)
10.	2,4,6-Trichlorophenol	93.0 (3.4)	87.8 (11)
11.	Pentachlorophenol (PCP)	90.5 (4.2)	81.0 (19)

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