Benzyltrimethylammonium Chloride/ Benzyltriethylammonium Chloride/ Caffeine/4-Ethylbenzoic acid

Application Note: ADWCX10001

Agility Deluxe WCX SPE Cartridges

Compounds:

Benzyltrimethylammonium Chloride

Benzyltriethylammonium Chloride H₃C N CH₃

Caffeine

H₃C OH

4-Ethylbenzoic Acid

SPE EXTRACTION METHOD:

(Agility Deluxe WCX cartridge, 30 mg/ 1 cc, Cat#SYAGD8030-01)

Condition:

1 mL of methanol, followed by 1 mL of water



Load:

1 mL of sample



Wash:

1 mL 25mM sodium citrate buffer pH=5



Elute:

Elute neutral and acidic compounds with 1 mL of methanol

Elute quaternary ammonium salts with 2% (v/v) formic acid in 20/80 (v/v) methanol/acetonitrile



Evaporate and Reconstitute:

200 µL of 10% acetonitrile in water

RECOVERY AND PRECISION TEST RESULTS:

	Recovery%	CV(%)
Benzyltrimethyl-	85.5	4.4
ammonium Chlori		
Benzyltrietyl-	94.0	1.4
ammonium Chloride		
Caffeine	98.7	1.8
4-Ethylbenzoic Acid	98.8	2.5

HPLC-UV METHOD:

Column: Orosil C18-HC HPLC column 4.6x 150 mm, 3 μm.

Column Temp: 40°C **Mobile phase A:** 20 mM

Potassium Phosphate Monobasic

in 10% MeOH, pH 3.0 **Mobile phase B:** MeOH

Gradient table

Time (min)	%B
0	10
10	80
18	80

Flow rate: 0.8 mL/min Injection volume: 10 μL UV wavelength: 220 nm



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