ZA3000

Analysis of As in Drink (Flame Method)

INTRODUCTION: The standard for the ingredients in refreshing drinks as specified in the Food Sanitation Act states that arsenic should not be detected. Therefore, for the purpose of quality control, the analysis of arsenic is being performed. ZA3000 series instruments employ the polarized zeeman method as the BKG correction method even for the hydride generation method and it is possible to perform accurate BKG corrections and also to analyze arsenic with an extremely stable baseline. The result of the spike recovery test indicates that arsenic in drinks can be correctly analyzed.

INSTRUMENT CONDITIONS

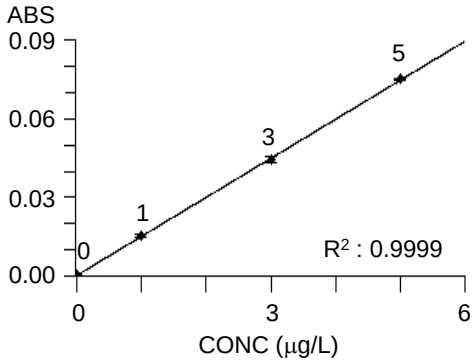
Element	: As	Atomizer	:	STD Burner
Instrument	: ZA3000	Flame	:	Air-C_2H_2
Atomization	: Flame	Fuel (C_2H_2)	:	1.2 L/min
Wavelength	: 193.7 nm	Oxidant (Air)	:	160 kPa
Lamp Current	: 12.0 mA			15.0 L/min
Slit Width	: 1.3 nm	Burner Height	:	10.0 mm

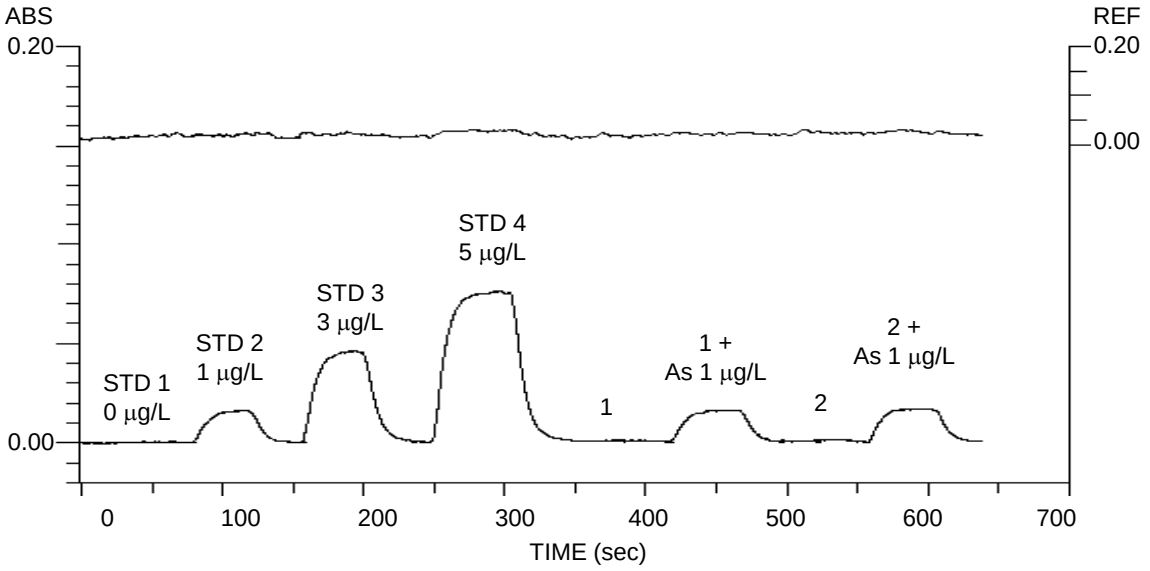
MEASUREMENT PARAMETERS

Meas. Mode	: Working Curve
Signal Mode	: BKG Corrected
Curve Order	: Linear
Calculation	: Integration
Time Constant	: 2.0 sec
Calculation Time	: 5.0 sec
Delay Time	: 5 sec

NOTE : Sample 1 : Deep ocean water, Sample 2: Tea drink

	CONC (μg/L)	Mean ABS	SD	RSD	REF
STD 1	0.00	0.0005	0.0001	20.00 %	0.0175
STD 2	1.00	0.0152	0.0006	3.95 %	0.0196
STD 3	3.00	0.0443	0.0011	2.48 %	0.0216
STD 4	5.00	0.0751	0.0002	0.27 %	0.0282
1	ND	0.0013	0.0001	7.69 %	0.0176
1+ As 1 μg/L	1.07	0.0162	0.0001	0.62 %	0.0220
2	ND	0.0014	0.0001	7.14 %	0.0260
2+ As 1 μg/L	1.12	0.0169	0.0001	0.59 %	0.0296





KEY WORDS

Bio/Medical Science/Food/Pharmaceutical,, Food, Food Chemistry, Toxins in Food, Drink, Arsenic, As, Flame, Hydride Generator, AA, ZA3000, HFS-3

Atomic Absorption Photometer (AA)

Sheet No. AA120015-00