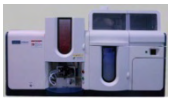


ZA3000

Analysis of Pb in River Water （Flame Method）

INTRODUCTION : The data obtained by analyzing lead in river water by a ZA3000 series using the flame method is introduced here. ZA3000 series employs the polarized zeeman correction method in the flame method as a background correction, just like a conventional instrument, and thus, very stable baseline can be obtained. As a result, ZA3000 series allows the accurate analysis of a trace amount (0.1 mg/L level) of lead.

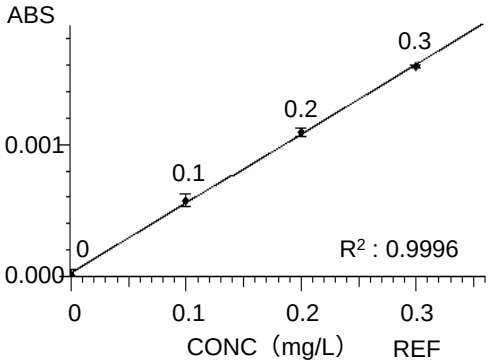
INSTRUMENT CONDITIONS

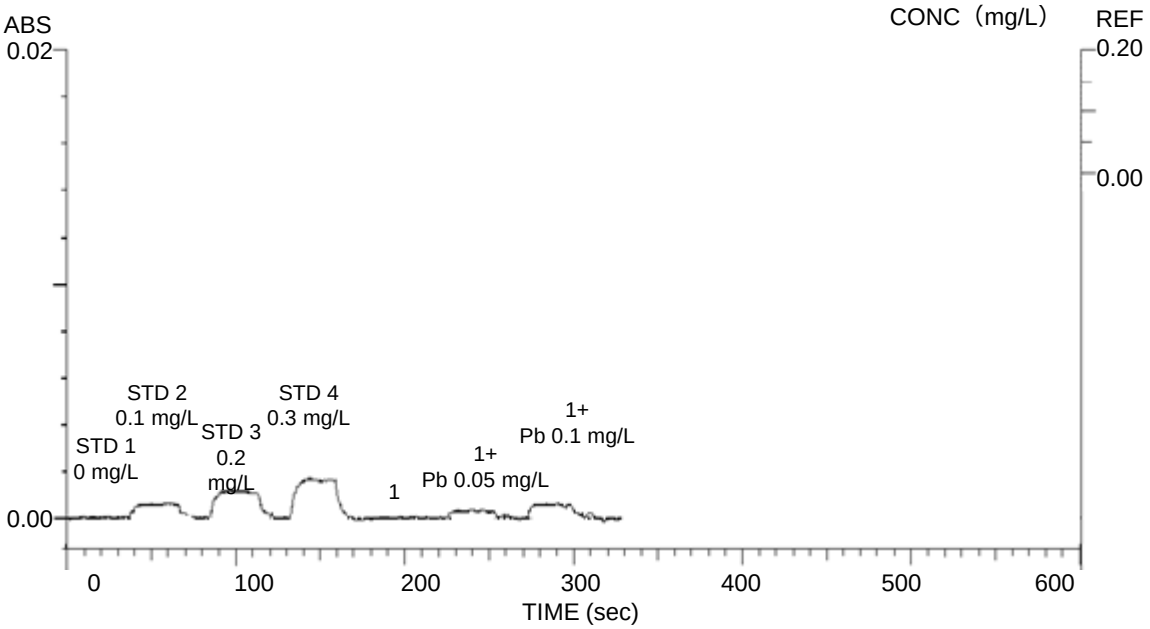
Element	: Pb	Atomizer	: STD Burner	Meas. Mode	: Working Curve
Instrument	: ZA3000	Flame	: Air-C_2H_2	Signal Mode	: BKG Corrected
Atomization	: Flame	Fuel (C_2H_2)	: 2.0 L/min	Curve Order	: Linear
Wavelength	: 283.3 nm	Oxidant (Air)	: 160 kPa	Calculation	: Integration
Lamp Current	: 5.0 mA		15.0 L/min	Time Constant	: 2.0 sec
Slit Width	: 1.3 nm	Burner Height	: 7.5 mm	Calculation Time	: 5.0 sec
				Delay Time	: 5 sec

MEASUREMENT PARAMETERS

NOTE : Lead was added to JSAC 0301, River Water Certified Reference Material, to make concentrations of 0.05 mg/L and 0.1 mg/L.

	CONC（mg/L）	Mean ABS	SD	RSD	REF
STD 1	0.0000	0.00001	0.00004	400.00 %	-0.00034
STD 2	0.1000	0.00057	0.00005	8.77 %	-0.00071
STD 3	0.2000	0.00109	0.00003	2.75 %	-0.00138
STD 4	0.3000	0.00158	0.00001	0.63 %	-0.00194
1	ND	-0.00001	0.00001	- %	-0.00295
1+ Pb 0.05mg/L	0.0492	0.00029	0.00001	3.45 %	-0.00297
1+ Pb 0.1mg/L	0.0960	0.00053	0.00000	0.00 %	-0.00304





KEY WORDS

Environmental Analysis Related, Environmental Water, Clean Water, Environmental Chemistry, River Water, Lead, Pb, Flame, AA, ZA3000, Flame, Environment

Atomic Absorption Photometer (AA)

Sheet No. AA120005-00