



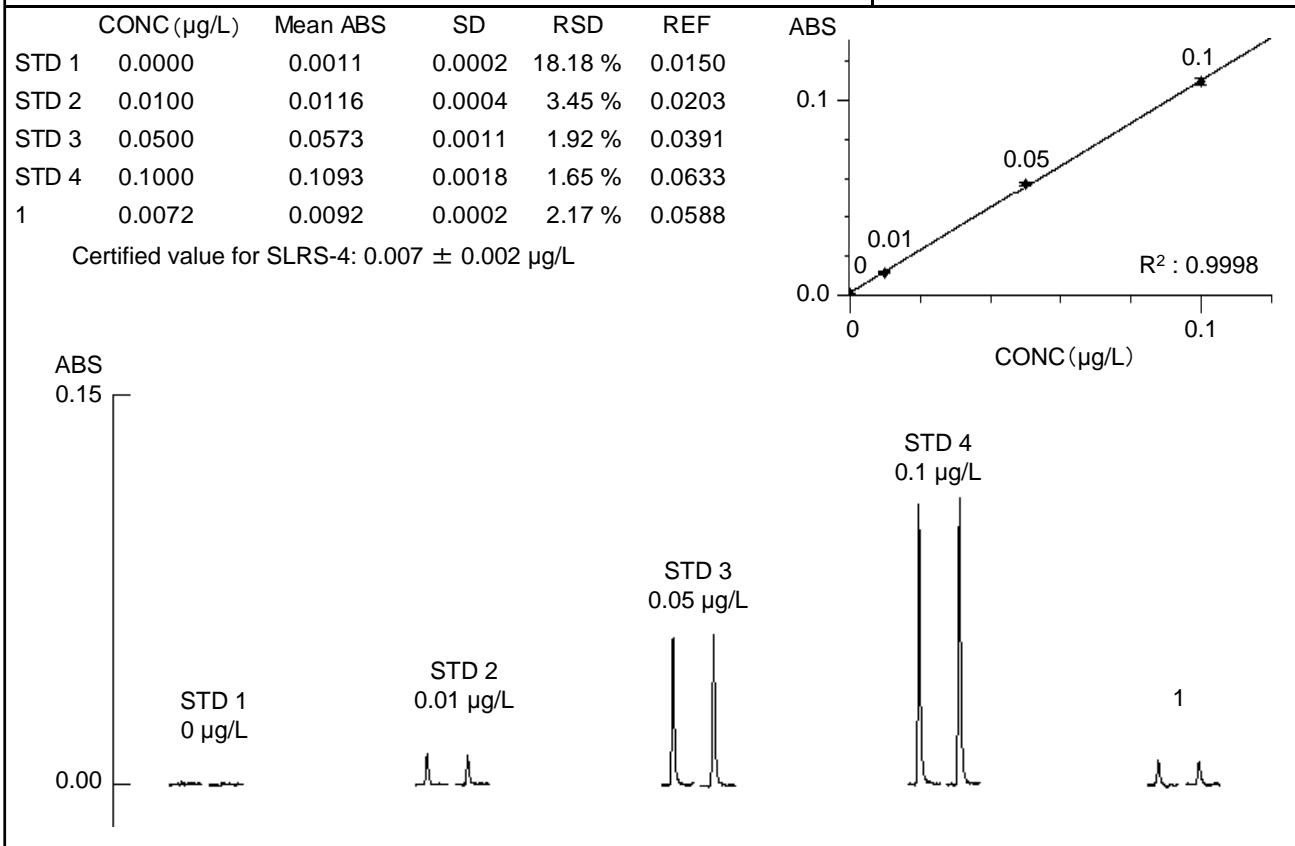
Analysis of Be in River Water (Electrothermal Method)

ZA3000

INTRODUCTION : The monitoring of substances toxic to aquatic animals is being conducted. By using the twin injection function, newly installed to the ZA3000 series, beryllium in river water was analyzed. There are two sample injection ports on the twin cuvette (Pyro D HR) and a large volume can be injected while the drying time can be set at the same as that for a conventional (Pyro C HR). The data shown below indicates that beryllium in river water at a ng/L level can be detected without concentration. The analysis result was within the range of the certified value for SLRS-4, a river water certified reference material.

INSTRUMENT CONDITIONS	MEASUREMENT PARAMETERS	GA AUTOSAMPLER
Element : Be	Meas. Mode : Working Curve	Sample Volume : 60 µL
Instrument : ZA3000	Signal Mode : BKG Corrected	Addition : Speed : 4
Atomization : GA	Curve Order : Linear	MATRIX MODIFIER
Wavelength : 234.9 nm	Calculation : Peak Height	Matrix Modifier
Lamp Current : 10.0 mA	Time Constant : 0.1 sec	: 100 mg/L Pd+Mg-10 % HNO ₃
Slit Width : 1.3 nm	Temp. Control : ON	Volume : 10 µL Order : After
Cuvette : Pyro D HR		

TEMPERATURE PROGRAM					NOTE
Stage	Initial/Final Temperature (°C)	Heating/Keeping (sec)	Gas Flow Rate (mL/min)	Gas	Pyro D HR, a cuvette specially designed for twin injection, was used for the measurement. Sample 1 : SLRS-4 River water Reference Material for Trace Metals
1 Drying	80 / 140	40 / 0	200	Normal	
2 Incineration	600 / 600	20 / 0	200	Normal	
3 Atomization	2700 / 2700	0 / 3	0	Normal	
4 Cleaning	2800 / 2800	0 / 4	200	Normal	



KEY WORDS Environmental Analysis Related, Environmental Water, Clean Water, Environmental Chemistry, River Water, Beryllium, Be, Flameless, Graphite Furnace, AA, ZA3000, GA, Pyro D HR, Environment	Atomic Absorption Photometer (AA) Sheet No. AA120018-00
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