SHIMADZU
Solutions for Science
since 1875

ATOMIC ABSORPTION SPECTROPHOTOMETRY DATA SHEET No.9

Calibration Curves of Standard Solutions Using AA-6200

Shimadzu AA-6200 offers high sensitivity analyses

Measurement of Cu

Cu

Lamp Condition

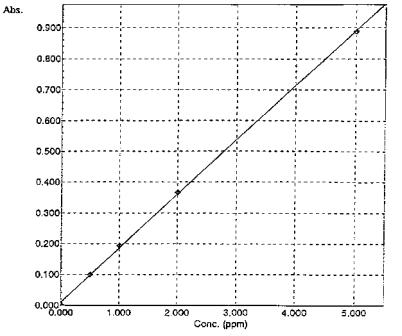
Lamp Current : 6mA
Set Wavelength : 324.8nm
Slit Width : 0.7nm
Lamp Mode : BGC-D2

Atomizer Condition

Fuel Gas Flow Rate : 1.8 l/min.
Support Gas Flow Rate : 8.0 l/min.
Flame Type : Air-C_2H_2

Abs.= 0.17615Conc+ 0.00986338
r= 0.9998

Conc.	Abs.
0.0000	0.0004
0.5000	0.0987
1.0000	0.1934
2.0000	0.3670
5.0000	0.8871



Measurement of Cr

Cr

Lamp Condition

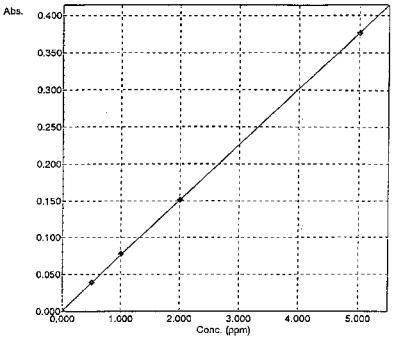
Lamp Current : 10mA
Set Wavelength : 357.9nm
Slit Width : 0.7nm
Lamp Mode : NON-BGC

Atomizer Condition

Fuel Gas Flow Rate : 3.0 l/min.
Support Gas Flow Rate : 7.2 l/min.
Flame Type : Air-C_2H_2

Abs.= 0.0751206Conc+ 0.000965948
r= 1.0000

Conc.	Abs.
0.0000	-0.0002
0.5000	0.0387
1.0000	0.0773
2.0000	0.1512
5.0000	0.3763



Measurement of Fe

Fe

Lamp Condition

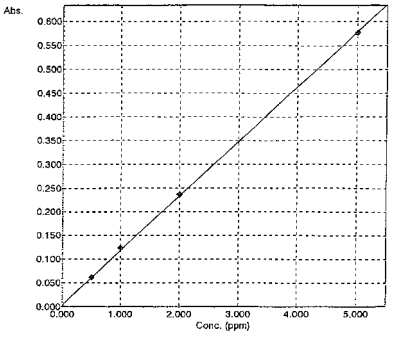
Lamp Current : 12mA
Set Wavelength : 248.3nm
Slit Width : 0.2nm
Lamp Mode : BGC-D2

Atomizer Condition

Fuel Gas Flow Rate : 2.2 l/min.
Support Gas Flow Rate : 8.0 l/min.
Flame Type : Air-C_2H_2

Abs.= 0.114959Conc+ 0.00376523
r= 0.9998

Conc.	Abs.
0.0000	-0.0025
0.5000	0.0621
1.0000	0.1234
2.0000	0.2366
5.0000	0.5764



Measurement of Pb

Pb

Lamp Condition

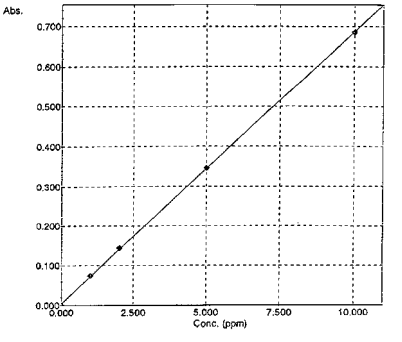
Lamp Current : 12mA
Set Wavelength : 217.0nm
Slit Width : 0.7nm
Lamp Mode : BGC-D2

Atomizer Condition

Fuel Gas Flow Rate : 2.0 l/min.
Support Gas Flow Rate : 7.0 l/min.
Flame Type : Air-C_2H_2

Abs.= 0.0682955Conc+ 0.00385065
r= 0.9999

Conc.	Abs.
0.0000	-0.0004
1.0000	0.0735
2.0000	0.1435
5.0000	0.3464
10.0000	0.6855



AA-6200 Hardware Specifications

Optics	Double Beam (chopper mirror)
Monochromator	aberration corrected Czerny-Turner monochromator Holographic grating
Wavelength range	190-900nm (Automated wavelength selection)
Slit	0.2nm, 0.7nm (Manual setting)
Background correction	D2-Lamp method
Lamp turret	2-lamps (Manual turret)
Nebulizer	Nebulizer integrated impact bead and jacket tip Pt/Ir capillary
Chamber	Polypropylene
Burner	Titanium 10cm slot burner (Optional high temperature burner) Fixed back/forward position and burner height (Simply switching of Air/C_2H_2 and N_2O/C_2H_2 burner)
Gas control	Manual setting of flow rate Automatic Air/N_2O switching system
Ignition	Push ignite button
Safety	Gas pressure monitoring to prevent flashback Automatic flame monitoring Safety interlock for misuse of burner The flame goes out automatically in case of power failure.
Software	Software based on MS-Windows™ 3.1 or MS-Windows 95™
Dimensions and weight	W690×D425×H370mm, 38kg
Power requirements	AC220, 230V±10%, 50/60Hz (Certification of CE mark)

AA-6200 Software Specifications

Data processing	
❶ Calibration curve	Linear regression analysis by least square method, Abs=f (Conc.) Dimension : 1st, 2nd, 3rd order, ON/OFF of zero intercept Selectable calibration curve by Curve ID
❷ Accuracy enhancement	Usage of average value, cancel of abnormal data by the limitation of CV or SD values.
❸ Sensitivity enhancement	Automatic calculation by sensitivity correction
❹ Actual concentration calculation	Automatic calculation of actual concentration by sample volume, fill-up volume, and dilution factor upon data acquisition
Signal process	
❶ Measurement procedure setting	Easy setting by Wizard function
❷ Data display	Measurement procedure, analysis results, actual concentration, calculation
❸ MRT worksheet	Factor of actual concentration, combined display of data and time display of multiple elements by tab sheet
❹ Signal display	Signal profile display, Current signal profile display, Overlay display of signal profiles
Retrieval and storage of data	Automatic loading of template parameter file upon software activation Automatic data storage function Raw signal profile can be stored.
Import/Export of data	Import sample name from ASCII file, Export data file by ASCII file

SHIMADZU

SHIMADZU CORPORATION. International Marketing Division
3. Kanda-Nishikicho 1-chome, Chiyoda-ku, Tokyo 101-8448, Japan
Phone: 81(3)3219-5641 Fax. 81(3)3219-5710 Cable Add.:SHIMADZU TOKYO

SHIMADZU SCIENTIFIC INSTRUMENTS, INC.
7102 Riverwood Drive, Columbia, Maryland 21046, U.S.A.
Phone: 1(410)381-1227 Fax. 1(410)381-1222 Toll Free: 1(800)477-1227

SHIMADZU DEUTSCHLAND GmbH
Albert-Hahn-Strasse 6-10, D-47269 Duisburg, F.R. Germany Phone: 49(203)7687-0 Fax. 49(203)766625

SHIMADZU (ASIA PACIFIC) PTE LTD.
16 Science Park Drive #01-01 Singapore Science Park, Singapore 118227, Republic of Singapore
Phone: 65-778 6280 Fax. 65-779 2935

SHIMADZU SCIENTIFIC INSTRUMENTS (OCEANIA) PTY. LTD.
Units F, 10-16 South Street Rydalmere N.S.W. 2116, Australia
Phone: 61(2)9684-4200 Fax. 61(2)9684-4055

SHIMADZU DO BRASIL COMERCIO LTDA.
Rua Cenno Sbrighi, 25, Agua Branca, Sao Paulo, CEP 05036-010, BRAZIL
Phone: (55)11-3611-1688 Fax. (55)11-3611-2209

SHIMADZU (HONG KONG) LIMITED
Suite 1028 Ocean Center, Harbour City, Tsim Sha Tsui, Kowloon HONG KONG
Phone: (852)2375-4979 Fax. (852)2199-7438

Overseas Offices
Istanbul, Beijing, Shanghai, Guangzhou, Shenyang, Chengdu, Moscow

URL http://www.shimadzu.com

Printed in Japan 3295-03306-10ATD