

Name of Machine	Bartington MS2WFP Susceptibility Meter
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Make: Bartington, UK	Model: Dual frequency Magnetic Susceptibility Meter (MS2WFP)
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Specifications

Specification	
Calibration accuracy	1% (10ml calibration sample provided)
Measurement period (MS2)*: x 1 range x 0.1 range	1.5s SI (1.2s CGS) 15s S (12s CGS)
Operating frequencies: LF HF	0.465kHz \pm 1% 4.65kHz \pm 1%
Amplitude of applied field	250 μ T peak \pm 10% (LF & HF)
Maximum resolution	2 x 10 ⁻⁶ SI (vol) (2 x 10 ⁻⁷ CGS) (LF & HF)
HF/LF cross calibration	0.1% worst case (can be adjusted using calibration sample)
Drift at room temperature	<2 x 10 ⁻⁶ SI (<2 x 10 ⁻⁶ CGS) in 3 minutes (after 5 minute warm-up)
Dimensions (W x H x D)	110 x 145 x 210mm
Sample cavity internal diameter	36mm
Weight	0.7kg
Enclosure material	High impact ABS

Description

MS2 sensor is used to measure the magnetic susceptibility of soil, rock and sediment samples, and is widely recognised as a standard instrument in the characterisation of the magnetic properties of soil. The dual frequency facility permits identification of superparamagnetic magnetic grains, which helps characterise the processes that affect the sample. The sensor is connected to the MS2 via a 50-ohm TNC cable. Power is supplied to an oscillator circuit within the sensor. This generates a low intensity (80 A/m) alternating magnetic field. Any material brought within the influence of this field will bring about a change in oscillator frequency. The frequency information is returned in pulse form to the MS2 where it is converted into a value of magnetic susceptibility. The sensor subjects the sample to a non-saturating field and this has the advantage of measuring initial susceptibility without destroying any sample magnetic remanence.

Principle

Susceptibility vs. Temperature - Curie temperature estimation (MS2WFP)

This system measures the magnetic susceptibility of samples over the temperature range -200°C to +850°C. It is used in the investigation of the magnetic properties of minerals and for the determination of Curie transition temperatures. The system comprises: the MS2 Meter; MS2W Water Jacketed Sensor; MS2WF Furnace; MS2WFP Power Supply Unit; and a self-contained water coolant supply, fully interlocked to prevent the MS2WF Furnace operating without coolant flow. The Geolabsoft software package (running under Windows) collects data and displays the results during the measurement sequence.

User Instructions

1. Each requisition should be addressed to XXXXXX for allotment of analysis date
2. Payment is to be made in advance through bank draft in favor of “**Director, BSIP, Lucknow**”. Kindly visit our website for the updated rate-list
3. Data generated will be provided on CD or DVD
4. Sediment/Soil samples should be fully packed in 10 cc plastic bottles

MEASUREMENT/ANALYSIS

I. Rock, Mineral and Environmental Magnetism Measurements

1. Magnetic Susceptibility (Both Low and High Frequency)
2. Temperature Dependence of Magnetic Susceptibility (χ -T Curves) - Curie Temperature estimation of magnetic minerals in the sample

Contact Person

In-Charge Dr. Binita Phartiyal: Mob. 9411856391
binita_phartiyal@bsip.res.in

Staff: Dr. Md. Arif: Mob. 9559096764
arif@bsip.res.in

Charges

S. No.	Measurements and Analysis	Instruments Used	Rates		
			Students @25% Discount	Govt. Organizations (University/ Institute)	Private Sector/Industry
1	Magnetic Susceptibility (Both low and high freq.)	Bartington MS2B Susceptibility Meter	Rs. 38/- each specimen	Rs. 50/- each specimen	Rs. 100/- each specimen
2	Temperature Dependence of Magnetic Susceptibility	Bartington MS2WFP Susceptibility Meter	Rs.375/- each specimen	Rs. 500/- each specimen	Rs. 1000/- each specimen
3	Sample Preparation	10cc Sample Bottles, Rock Saw Cutting Unit	Rs. 38/- each specimen	Rs. 50/- for each specimen	Rs. 100/- for each specimen

To be filled in by the user while submitting the form

Job No as ASE CF

Date of submission:

(Sample Information Form)

REQUISITION FORM

BIRBAL SAHNI INSTITUTE OF PALAEOSCIECES, LUCKNOW

53, University Road, Lucknow, Ph. 0522-2740008, 2740399

(ASE Central Facility)

Website: www.bsip.res.in, E mail: gcms.bsip@gmail.com

Geochemistry Lab

(Information to be filled in by the user)

Name: _____

Address: _____

Email and Mobile No.: _____

Category (In-house/sponsored/Govt. organization/private): _____

Number of samples: _____

Sl. No.	Sample ID	Type/Nature of Sample	Quantity	Year of collection	Lat./Long.	Remarks, if any
1						
2						
3						
4						
5						

To be filled in by the user while submitting the form

Job No as ASE CF

Date of submission:

SAMPLE REQUISITION FORM

BIRBAL SAHNI INSTITUTE OF PALAEOSCIECES, LUCKNOW

53, University Road, Lucknow, Ph. 0522-2740008, 2740399

(ASE Central Facility)

Website: www.bsip.res.in, E mail: gcms.bsip@gmail.com

Geochemistry Lab

(Information to be filled in by the user)

Name: _____

Address: _____

Email and Mobile No.: _____

Category (Inhouse/inhouse sponsored/Govt. organization/private): _____

Number of samples: _____

Nature of samples (with details): _____

Scientific Objective of this study: _____

Additional information, if any: _____

Location (Lat & Long): _____

Exposed Section/Trench/Core/Others: _____

(For office use only)

Lab Reference No.:

R.P.C.C./ Registrar : Kindly raise the bill for the above

Total Charges:

Taxes:

Grand Total: