CS4
FURNACE APPARATUS FOR KLY5-A AND MFK1-FA KAPPABRIDGES

AGICO
ADVANCED GEOSCIENCE INSTRUMENTS COMPANY

Supplement for KLY5-A and MFK1-FA Kappabridges for measurements of high-temperature variations of magnetic susceptibility.

General Description

The **CS4 High Temperature Furnace Apparatus** is optional attachment for **KLY5-A** and **MFK1-FA/A** Kappabridges designed for measurement of the temperature variations of low-field magnetic susceptibility of minerals, rocks and synthetic materials in the temperature range from **ambient temperature to 700˚C**. Measurements can be performed under the protective argon atmosphere to prevent oxidation of measured specimen.

The apparatus consists of a non-magnetic furnace with a special platinum temperature sensor, a temperature control unit, and a cooling water reservoir. The specimen (up to 0.25 cm³ in volume) is placed in a silica glass vessel, heated by a platinum wire, and the temperature is measured by the temperature sensor.

The quasicontinuous measurement process is fully automated, being controlled by the software **Sufyte.** Data processing software **Cureval** serves for advanced analysis of thermomagnetic curves such as empty furnace measurement substraction, Curie temperature estimation and separation of ferromagnetic and paramagnetic part of susceptibility.

Main Features

Lowest detectable susceptibility change 1×10^{-7} SI.

Measurement at high temperatures up to 700˚ C.

Software controlled heating and cooling modes.

Measurement in the air or argon atmosphere.

500 to 700 pairs of susceptibility and temperature measurements to define a thermomagnetic curve.

Technical specifications

Nominal specimen volume:	0.25 cm³
Inner diameter of measuring vessel:	6 mm
Temperature range:	room temp up to 700˚C
Accuracy of temperature determination:	± 2 ˚C
Sensitivity to susceptibility changes:	1×10^{-7} SI
Power requirements: 100 - 240 V, 50/60 Hz, 350 VA	

CS4 Furnace Apparatus Comprising

CS4 Temperature Control Unit
Furnace
Water Cooling Reservoir
Temperature Sensor
Argon Gas Flowmeter
Power Supply Unit
Specimen Vessels
Set of Interconnecting Cables
Measuring Software, CUREVAL Software
User's Manual

LABORATORY INSTRUMENTS FOR MEASUREMENT OF MAGNETIC PROPERTIES OF ROCKS

CS-L
CRYOSTAT APPARATUS FOR KLY SERIES AND MFK1-FA / A KAPPABRIDGES

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Supplement for KLY5-A and MFK1-FA Kappabridges for measurements of low-temperature variations of magnetic susceptibility.

General Description

The **CS-L Low Temperature Cryostat Apparatus** is optional attachment for **KLY series** and **MFK1-FA/A** Kappabridges designed for measurement of the temperature variation of low-field magnetic susceptibility of minerals, rocks and synthetic materials in the temperature range from **-192°C to ambient temperature**. CS4 (or CS-3) apparatus is mandatory prerequisity for CS-L system.

The specimen is placed in a measuring vessel which is cooled inside the cryostat by liquid nitrogen and then heated spontaneously to a given temperature. The argon gas is needed for deplenishing the liquid nitrogen out of cryostat.

The quasi-continuous measurement process is fully automated, being controlled by the software **Sufyte**. Data processing software **Cureval** serves for advanced analysis of thermomagnetic curves such as empty furnace measurement substraction, Curie temperature estimation and separation of ferromagnetic and paramagnetic part of susceptibility.

Main Features

Measurement at low temperatures from -192° C

Cooled by liquid nitrogen

Estimation of ratio between ferromagnetic

and paramagnetic part of susceptibility

Technical specifications

Nominal specimen volume: $0.25\ cm^3$

Inner diameter of measuring vessel: 6 mm

Temperature range: -192°C - ambient temperature

Accuracy of temperature determination: ±2 °C

Sensitivity to susceptibility changes: $1 \times 10^{-7}\ SI$

Power requirements: 100 - 240 V, 50/60 Hz, 350 VA

CS-L Cryostat Apparatus Comprising

Cryostat

Temperature Sensor

Specimen Vessels

Pot and Funnel for Liquid Nitrogen

Argon Blow System

Measuring Software