

# Magnetic Susceptibility Balances



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For educators and laboratory professionals who have long struggled with the Gouy method, an awkward traditional technique for the measurement of magnetic susceptibility, an amazingly simplified alternative is now available. These Magnetic Susceptibility Balances are a revolutionary testing device offering unparalleled advantages over traditional techniques. Two models are available, the original MSB-I and the Mark II.

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# MKII Magnetic Susceptibility Balance & Accessories



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## MKII Magnetic Susceptibility Balance

The enhanced features incorporated into the MKII unit are aimed at industrial quality control and analytical applications. The versatility and sensitivity makes it particularly suited to research and analytical methods development.

This balance is based on the Evans design and has all the advantages of the MSB-1 and much more. Compare these features:

### Portability

This balance weighs just 5 pounds (2.3 pounds less than the MSB-I) and comes supplied with its own rechargeable battery supply which allows 8 hours of operation away from a power supply. It comes fully operational in its own carrying case. A simply applied, external travel clamp and adjustable level control makes it easy to transport and set-up...ready in less than a minute.

### Efficiency and Simplicity through Microprocessor Control

An 8751 microprocessor has the balance calibration constant entered during manufacture. The digital units are displayed directly in cgs volume susceptibility units without further adjustment. Mass susceptibility can be read directly by entering the sample length and weight. Sensors automatically detect and correct for different diameters of sample tubes available.

In addition to the direct digital read-out, an analogue output for a chart recorder is available as well as an RS232 interface for your computer. Also included is easy to use, menu-driven software that greatly simplifies data collection, analysis, and storage.

The balance automatically zeros itself when a sample tube is not in position so it is always ready for use. The Auto-tare facility is implemented by simply pushing the tare button with a blank tube in the sample position.

The sample handling detector is separated from the read-out and controls which are situated on a hand-













held unit. (This is particularly useful when analyzing hazardous materials.)

### Diversity

The balance comes equipped with the following sample tubes which are intended to expand the range of new applications which are now possible: two standard sample tubes (4mm OD), one large sample tube (5mm OD)(an approximate 60% increase in sample volume), one solution flow cell and one gas-tight/air-sensitive sample tube.

### Sensitivity

The MKII can now measure from  $1.000 \times 10^{-3}$  to  $0.001 \times 10^{-7}$  c.g.s. units in volume magnetic susceptibility units. (This is two orders of magnitude more sensitive than the MSB-I which is itself as sensitive as most traditional methods.)

	36154	Air Sensitive Sample Tubes
	40343	Calibration standard for MSB
	36155	Flow Cell
	43829	Holder for sample tubes
	36153	Large Sample Tubes, 5mm OD
	36184	Magnetic Susceptibility Balance, MKII, 115V
	41469	Magnetic Susceptibility Balance, MKII, 220V
	44878	MKII normal tube adapter
	14349	Standard Sample Tube, 3.24mm ID
	14350	Thin-Bore Sample Tube, 2mm ID
	43404	Torsion wire for Magnetic Susceptibility Balance
	36152	Ultra thin-bore sample tubes, 1mm ID, <3.98mm OD

# MSB-1 Magnetic Susceptibility Balance & Accessories



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## Advantages of the MSB-1

### Compare

The balance is compact, portable, lightweight and reasonably priced. For classroom or laboratory use, installation is a snap. Just plug it into any standard 115VAC/220VAC source.

### Easy to Operate

Measurement of magnetic susceptibility has never been simpler. You merely insert the sample tube and instantly read the voltage from the digital voltmeter. This read-out is used in a simple equation to provide a quick, reliable measurement of magnetic susceptibility.

### Flexible

Measurements can be made on a wide range of both solid and liquid paramagnetic and diamagnetic materials. Even with small samples, you can get accurate measurements. The balance normally works with a sample weight of about 250mg. By using a thin bore or ultra-thin bore sample tube, as little as 100mg or 50mg is required to obtain an accurate measurement.

### Accurate

Since sensitivity and accuracy levels achieved with this technique are comparable to traditional methods, you obtain measurements you can rely on. You enjoy tremendous cost savings without sacrificing either accuracy or sensitivity.

## High purity metals and materials Fundamentals for research



















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	36154	Air Sensitive Sample Tubes
	40343	Calibration standard for MSB
	44406	Coil/pcb assembly for MSB-1
	36155	Flow Cell
	43829	Holder for sample tubes
	36153	Large Sample Tubes, 5mm OD
	14120	Magnetic Susceptibility Balance, MSB-1, 115V
	41468	Magnetic Susceptibility Balance, MSB-1, 220V
	47112	Power supply unit for MSB-1

	47000	Spirit level for MSB-1
	14349	Standard Sample Tube, 3.24mm ID
	14350	Thin-Bore Sample Tube, 2mm ID
	43404	Torsion wire for Magnetic Susceptibility Balance
	41758	Travel clamp for MSB-1
	45476	Tube guide assembly for MSB-1
	36152	Ultra thin-bore sample tubes, 1mm ID, <3.98mm OD

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