

SPECIALIZED EQUIPMENT SPECIFICATIONS

Fenn R&D Institute (FRDI)

Fenn College of Engineering, Cleveland State University

Name:	Cahn Instruments C31 Microbalance
Description/Use:	measures weights and forces up to 3.5 grams and is sensitive to changes as small as 0.1 micrograms
User fee:	Call, Email
Fee basis:	per sample
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DETAILED DESCRIPTION:

The Cahn C31 is a very sensitive weight and measurement instrument. It is designed for weights and forces up to 3.5 grams and is sensitive to changes as small as 0.1 micrograms. It may be described as a force-to-current converter.



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OPERATION:

Weights or forces to be measured are applied to sample side of the beam, which produces a force the axis of rotation. An electric current flowing in the torque motor produces a force equal in magnitude but opposite in direction of the produced force. This force can be read off the digital output.

SPECIFICATIONS:

Capacity:	1.5 grams
Weight Range/sensitivity:	25 mg/0.1 μ g 250 mg/1 μ g
Tare: Mechanical:	1.5 grams
Electrical:	250 mg
Accuracy (% of weight range limited by precision):	0.0012%
Precision: Ultimate:	0.1 μ g
Fraction of Load:	0.0001%