

Resource Summary Report

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CU Boulder Electron Microprobe Laboratory

RRID:SCR_012321

Type: Tool

Proper Citation

CU Boulder Electron Microprobe Laboratory (RRID:SCR_012321)

Resource Information

URL: <http://www.scienceexchange.com/facilities/electron-microprobe-laboratory>

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Description: An electron microprobe is an electron microscope designed for the non-destructive x-ray microanalysis and imaging of solid materials. It is capable of high spatial resolution (1 micron beam size) and relatively high analytical sensitivity. The analytical facilities' JEOL JXA-8600 can acquire digital secondary-electron and backscattered-electron images as well as elemental x-ray maps. It is equipped with 4 wavelength-dispersive spectrometers and an energy-dispersive spectrometer. Most of the periodic table can in principle be analyzed (Be through U), subject to several important considerations. The quality of analyses performed depends essentially on the quality of sample preparation, character of the sample material, and availability of appropriate primary and secondary calibration standards for the desired elements. A precision usually less than 0.5% relative depending on element abundance, and accuracy as good as 1-2% can be obtained with this instrument. The analytical sensitivity ranges from a low of ~50 parts per million for optimum cases, to a typical detection limit of several hundred ppm, but can be as high as several weight percent for problem elements. The volume sampled is typically a few cubic microns, corresponding to a weight of a few picograms.

Abbreviations: CU-Boulder Electron Microprobe Laboratory

Synonyms: University of Colorado Boulder Electron Microprobe Laboratory, University of Colorado at Boulder Electron Microprobe Laboratory

Resource Type: access service resource, core facility, service resource

Resource Name: CU Boulder Electron Microprobe Laboratory

Resource ID: SCR_012321

Alternate IDs: SciEx_11735

Record Creation Time: 20220129T080309+0000

Record Last Update: 20260905T133353+0000

Ratings and Alerts

No rating or validation information has been found for CU Boulder Electron Microprobe Laboratory.

No alerts have been found for CU Boulder Electron Microprobe Laboratory.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We have not found any literature mentions for this resource.