MicroMill²

Micro-Sampling Device



Introducing Elemental Scientific Lasers' MicroMill² – a device for microsampling of minerals.

It was designed for high-resolution milling for sampling from microscopic areas for chemical and isotopic analysis.

Subsampling of complex mineral zonation provides high-resolution elemental isotopic chemistries and intra-zonal variations of crystal structure.

Subsampling within annual growth banding of molluscan shells allows reconstructing seasonal variations present during the life cycle of an organism, e.g. clam.

LASERS

Elemental Scientific





Features and Benefits

- Sub-micron sample motion control
 - Precisely sample from any growth band or zoned mineral.
- 5MP digital sample viewing
 - See features with clarity before sampling in a modern software platform.
- Drill tilt up to 22.5°
 - Enables flat-face milling of growth bands and interfaces.
- 50 mm computer-driven sample movement in X, Y and Z axes
 - Accurate and precise control directly from the PC.

MicroMill2 Specifications Summary



Distributed by: Kenelec Scientific Pty Ltd 1300 73 22 33 sales@kenelec.com.au www.kenelec.com.au



Performance Specifications	
Digital Camera	5 MP (USB3)
Zoom Range (FOV)	10 mm to 42 µm
XYZ Stage Travel (mm)	50 x 50 x 50 mm (standard) 100 x 100 x 50 mm (optional)
XYZ Stage Step Resolution (nm)	50 x 50 x 25 nm
Sample Lighting	All LED: Flood lighting Transmitted lighting
Polarizer	Software-controlled rotating cross polarizer
Drill Speed	0-50,000 rpm (software controlled)
Angled Drilling	0-22.5° drill angle
Milling Chuck	Low eccentricity, high speed
Drill Bit Shank Diameter	1/8" or 3/32"





Software Specification

ActiveView2 software for Windows10

Live video during pattern placement and milling

Import image and coordinate data from other systems; Work directly from your images for improved workflow

On-screen display of digitized and interpolated subsampling paths

Precise depth control over entire area of sample

Z-tilt correction and contour-following functions

Offline digitized files can be read directly with software transformation of image coordinates

Data record file with sample-path information and estimated sample volumes

Save, recall, and export images (BMP, TIF and JPG,)

Site Requirements

Depth	18 / 457 mm
Width	7.5" / 185 mm
Height	16" / 405 mm
Weight	50 lb / 23 kg
Power Requirements	100-240 V (AC), 250 W, 50/60 Hz

Elemental Scientific

© Elemental Scientific Lasers LLC | 685 Old Buffalo Trail | Bozeman, MT, 59715 | United States Tel: + 1 406 586 3159 | lasers@icpms.com | www.nwrlasers.com