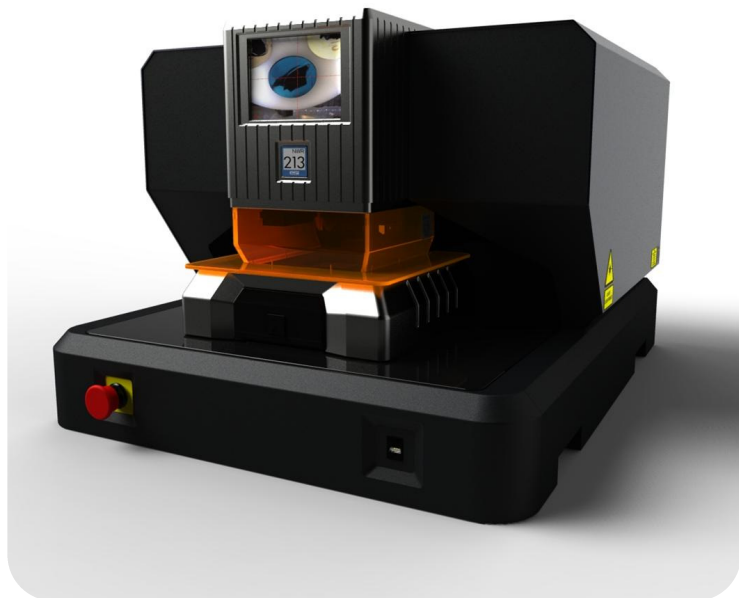


NWR 213



Most Flexible Solid Sampling System

ESI's NWR 213 combines New Wave Research's experience in laser ablation with the latest leading edge technology to create the ultimate LA-ICP-MS experience by providing, Un-matched Video Imaging and Navigation, Superior Sample Handling Experience and Benchmark Analytical Results

Industry's Gold Standard

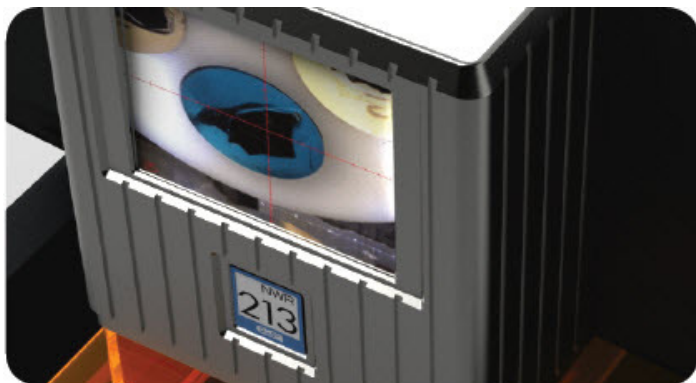
- Broad Range of sample chambers optimized for each specific application
- Higher absorption rate
- Fast Wash in/out
- Optical Attenuator for full energy control

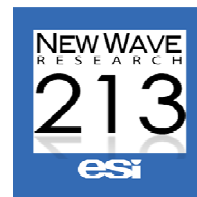
3rd Generation Laser Ablation Platform

NWR 213 is the 3rd generation, high-performance Nd:YAG deep UV (213nm) laser ablation system, providing flat craters and high absorption for the analysis of opaque and transparent materials alike. The deep UV 213nm wavelength produces a finer particle distribution, increasing transport efficiency of the aerosol resulting in better sensitivities and minimal deposits at the plasma. NWR 213 combines the ease-of-use of a solid-state laser with the high-efficiency sampling of deep-UV wavelengths

The NWR 213 Advantages

- Higher absorption rate at 213nm vastly improves ablation of all materials including fragile and easily cleaved minerals.
- "Resonator-flat" beam and specialized beam delivery system yield uniform craters with energy densities that remain constant when changing spot sizes.
- Precision depth profiling and spot sizes to 5µm make this an excellent inclusion and thin-film analysis tool.
- Fully automated laser ablation software, including large Field of View touch screen for navigation





Site Requirements	
Temperature	70°F ± 10°F (21°C ± 3°C)
Relative Humidity	20% - 65% non condensing
Laser Classification	Class 4
Power Requirements	100-110V (AC), 3A, 50/60 Hz 220-240V (AC), 3A, 50/60 Hz
Foot Print	
Height	19" (48 cm)
Width	31" (81 cm)
Length	24" (61 cm)
Weight	200 lb (91 Kg)

Performance Specification	
Laser	Nd:YAG @ 213nm
Repetition Rate	1-20 Hz
Fluence	>25 J/cm ²
Spot Sizes	13 Pre-calibrated spots sizes from 4
XY Stage	100 mm x 100 mm Travel
Stage Step Resolution	1 µm
General Specification	
Safety Classification	Fully Interlocked, Class-1 system
Warranty	12 month
Triggering	Bi-Directional control between Mass Spectrometer and Laser Ablation system
Viewing Optics	Large Field of View navigational optics with touch screen @ High-Resolution
Mass Flow Controller	Fully Integrated MFC
Confocal Color Video Microscope	2 µm camera resolution, with color CCD camera
Optical Magnification	5.6X to 60X (objective to camera mag.) <u>Primary Viewing System:</u> Low Magnification: 0.70mm x 0.56mm High Magnification: 0.15mm x 0.12mm <u>Secondary Viewing System:</u> 25 mm x 19 mm Sample Mosaic: 100 mm x 100 mm
Polarizer	Rotating cross-polarizer, fully controlled from GUI

No known hazards during to eye or skin *during normal operation*
 Note: Service Operation may require access to hazardous embedded lasers

USA

New Wave Research
 (a division of esi)

48660 Kato Blvd. Fremont CA
 94538-7339.
 USA
 Tel: +1 510-249-1550
 Fax: +1 510-249-1551
 Email: lasers@new-wave.com

Japan

New Wave Research
 (a division of esi)

Pierwest Square Northwing 2F, 1-11-8
 Tsukuda, Chuo-ku, Tokyo, 104-0051,
 Japan
 Tel: +81-3-3533-8444
 Fax: +81-3-3533-8443
 Email: newWaveKK@new-wave.com

Taiwan

New Wave Research
 (a division of esi)

2Fl., No. 58-3, XingShan Road,
 Neihu Dist., Taipei,
 Taiwan 114 ROC
 Tel: + 886-2-8792-7585
 Fax: + 886-2-8792-7584
 Email: NewWaveGC@new-wave.com

Europe

New Wave Research
 (a division of esi)

8 Avro Court, Ermine Business Park,
 Huntingdon, Cambs, PE29 6XS.
 United Kingdom
 Tel: + 44 1480 456566
 Fax: + 44 1480 456545
 Email: NewWaveEU@new-wave.com

China

New Wave Research
 (a division of esi)

Room 1701~1702, Information Tower,
 No.1403 Min Sheng Road, Pudong,
 China
 Tel: + 86 21 3392 7070
 Fax: + 86 21 5237 1289
 Email: NewWaveCN@new-wave.com