Nieka®

The HEAT is ON

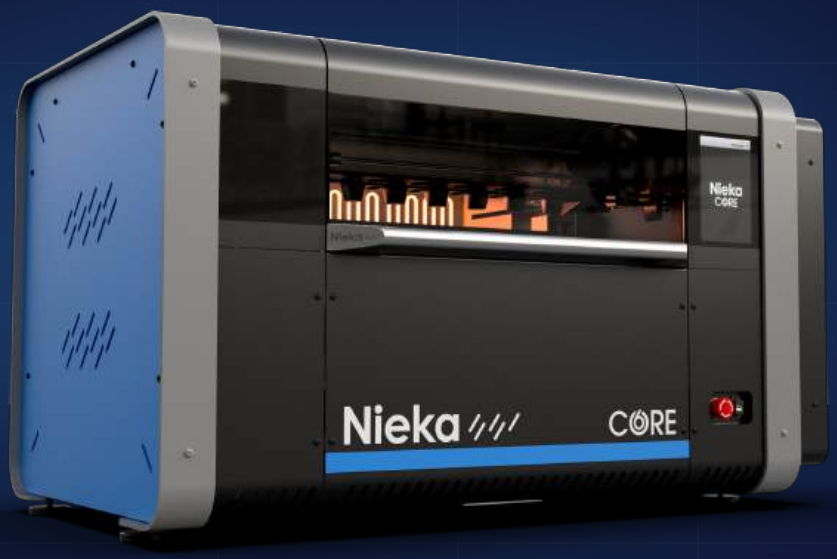
THE WORLD'S FASTEST FLUXER IS HERE

CORE

Performance through SCIENCE

The Core-6 is the achievement of a decade-long research program where nothing has been left behind.

With the Core systems, you will benefit from multiple inventions and the experience of Nieka users worldwide. The Core-6 mechanical systems are based on the proven Nieka platform: they are sturdy, efficient and easy to maintain.



Features

Modular furnace for instant on-site maintenance

The main furnace can be removed and replaced within minutes with no special tools. You can resume operation without a lengthy cooldown and on-site repair. The entire heating assembly comes as a snap: elements, insulation and sensors, nothing is left behind.

Pre-oxidation chamber for true temperature ramping (optional)*

Several sample types require a pre-oxidation step, which is challenging with a furnace-type fluxer. Our inovative middle chamber allows an intermediate temperature step.

Fully modular power system and zone control

Each furnace zone is powered by its own power module. The temperature inside the furnace is uniform.

Filtered cooling air

The stream of air cooling the glass disks and internal electronics is fully filtered. Even in dusty environments, the Nieka Core system will deliver premium analytical purity.

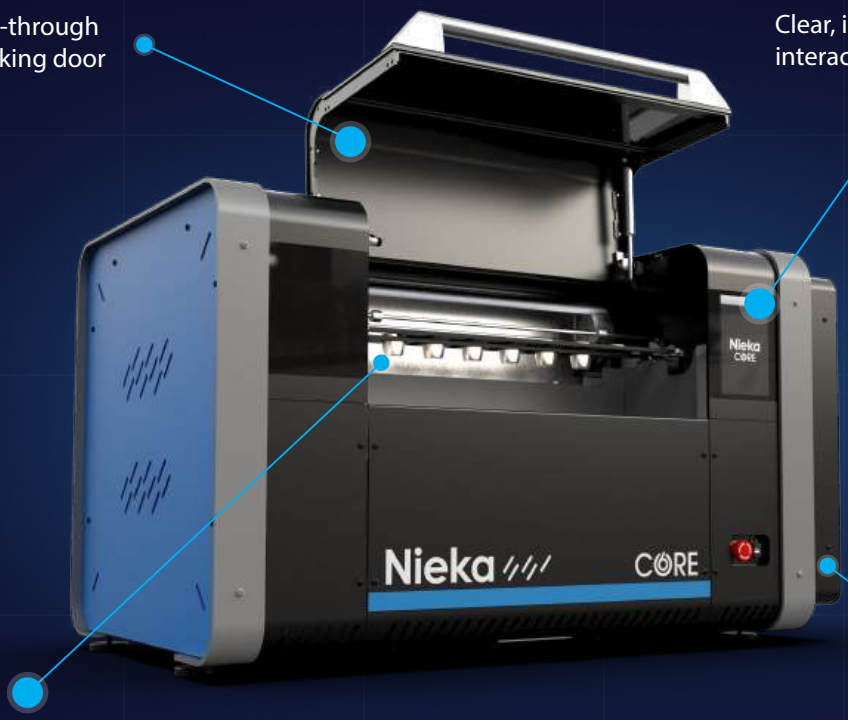
Circular agitation motion allowing faster sample dissolution

Borate fusion is a dissolution technique. If you stir better, you dissolve faster, its that simple. Our fully circular and rapid motion will reduce repeat and save up to 30% of dissolution time.

Cold crucible retaining bar*

When the hot crucibles are moved out of the furnace for the pouring step, a special bar is waiting outside to hold them in place for the final tilt. Having such bar outside of the furnace reduces the contamination and failures associated with retaining bars inside the furnace.

Nieka Core - 6

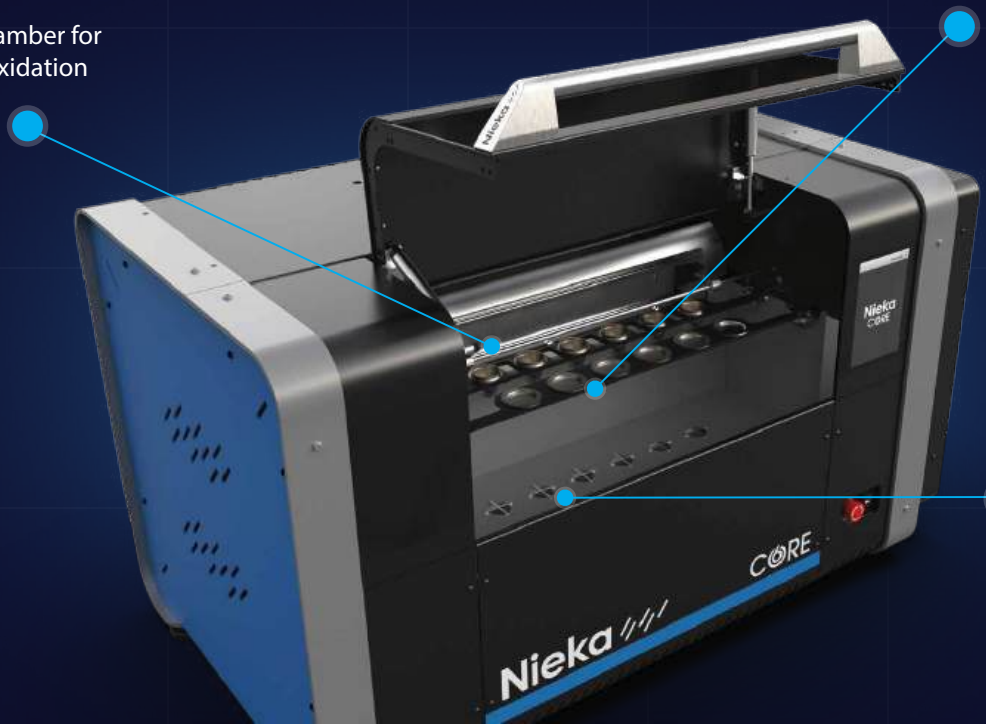


Large see-through safety locking door

Clear, intuitive interface for easy interaction with the Core system

Cold retaining bar for zero contamination from holding devices

Easy-to-access modular electronics



High-purity flux-resistant ceramic crucible and mold holders

Intermediate chamber for controlled pre-oxidation

Powerful air channels deliver large volumes of filtered air for faster cooling

Pre-oxidation chamber

Transform your difficult samples to their fully oxidized state

Zone 1 - Room temperature

Sample, oxidizer and flux are loaded in the crucible

Zone 2 - Pre-oxidation zone

The crucible slides into and intermediate zone where the temperature is controlled for a smooth and complete pre-oxidation

Zone 3 - Fusion furnace

After a complete pre-oxidation, the crucible moves in the main furnace where the flux melts and dissolves the sample

Specifications

Power	208-240Vac 50-60Hz 1 or 3PH / 380-415 Vac 50-60 Hz 3 PH input power: 5.5 kVA / up to 4.8 kW heating power in the furnace
Dimension (W, H, D)	115 x 67x 66 cm; 125 kg / no external power supply unit
Heaters	High-emissivity resistive heaters
Programming	Up to 32 steps per program; 32 program storage space + external USB
Mixing	Clockwise and counter-clockwise agitation, fully configurable
Heating configuration	up to 1250oC intermitent, 1200oC continuous / pre-heating schedule
Heater servicing	Modular elements with quick connectors, fully detachable furnace
Bead cooling	Fully configurable cooling steps, from 0 to 100%, filtered air
Connectivity	USB/LAN connectivity
XRF / ICP sample preparation capability	Bead-solution switch using modular system
Ventilation requirement	No full hood required, 7 m^3 / min, extraction point behind the instrument
Control and operation	Touchscreen interface with password-protected access levels
Crucible/mold holders	non-oxide ceramics, resistant to flux spillage
Safety	Locking door, redundant systems, emergency stop switch, cold-to-cold operation, lockable power disconnect, UL 94 components

We reserve the right to change the specifications, dimensions, and features from time to time, as long as the alteration is minor or an improvement to the said product.

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