



Bioruptor® Megaruptor®

Your solution for any application

Adaptive Cavitation Technology (ACT)

Uses a highly-controlled ultrasonic energy with ACT to accurately achieve random and unbiased shearing for different fragment lengths from 150 bp to 1 kb. The gentle ultrasound preserves the integrity of biological samples and ensures high sample recovery.

Bioruptor® Pico

THROUGHPUT

Simultaneous sonication of 1 - 16 samples

SAMPLE VOLUME

Ultra-low volumes of 20 µl to larger samples of up to 2 ml

TEMPERATURE-CONTROLLED

Cooling system with integrated valve* to guarantee the automatic temperature control of the bath during the full shearing process.



Protocols for Chromatin shearing – DNA shearing – RNA shearing – Protein extraction - FFPE Nucleic acid extraction – Liposome preparation – Protein seeding and aggregation

Chromatin shearing 200 bp - 1kb
DNA shearing 150 bp - 1 kb
RNA shearing 200 bp - 1 kb
FFPE nucleic acid extraction

Cell lysis and tissue disruption
Mass spectrometry
Protein aggregation

0.2mL – 16 tubes – 20 - 100µl
0.65ml – 12 tubes – 100µl
1.5ml – 6 tubes – 100 - 300 µl
15mL – 6 tubes – 300µl - 2ml

The Bioruptor is validated by researchers in over 6,000 citations for diverse applications

PATENTED

US9464314B2 – Fragmenting DNA sequences longer than 10,000 bp using ultrasonication

BE1024657B1 – Support for sample tubes for the sonication of a biological material

Megaruptor®

The Megaruptor 3 provides simple and automated **DNA shearing** with unrivaled tight DNA fragment size distribution across a wide concentration range regardless of DNA source. This device is easy to use and allows you to choose the target range of fragment sizes for optimal long-read sequencing.

Additionally to the DNA fragment length flexibility and unrivaled tight size distribution, the novel Megaruptor 3 HT offers an ultrafast protocol for increased sample processing speed to accommodate high-throughput sequencing projects. When using the ultrafast protocol, the Megaruptor 3 HT allows shearing of 96 samples in 2 h into fragments of 7 to 40 kb.



The NEW Megaruptor 3 HT

- **High throughput:** Processes 96 samples in 2h when using the ultrafast protocol.
- **Flexibility:** Use the regular protocol for a DNA fragment size range from 5kb to >100kb or the ultrafast protocol for rapid fragmentation to 7kb to 40kb.
- **Unmatched quality:** Provides the tight DNA fragment distribution necessary for high quality long-read sequencing.
- **Reliable:** Enables processing of highly viscous samples.
- **Ergonomic:** Includes a user-friendly interface and has a small footprint.

Technical Specifications

Protocol	Regular	⚡ Ultrafast
Run duration	20 min – few hours	1 – 5 min
Size	5 – 100 kb	7 – 40 kb
Concentration	0 – 150 ng/μl	1 – 50 ng/μl
Volume	40 – 750 μl	50 – 500 μl
Speed settings	1 – 65	30 – 59
Throughput	96 samples in 1 day	96 samples in < 2h*
Shearing disposables	Multiple orifice hydrodynamic pore	
Hardware	State-of-the-art electronics Large memory for new features Extensive fine-tuning options Robust titanium pins	

**in combination with the Megaruptor 12 samples cassette*