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Sole Source Specification TissueLyser III

CE

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Product description

For medium- to high-throughput sample disruption for molecular analysis

- Convenient and secure disruption process
- Touchscreen for ease of use
- Integrated software for pre-programmed and customizable protocols
- Wide range of accessories to process versatile sample volumes
- Reproducible results for difficult-to-lyse samples (cells, tissues, bones, etc.)

Principle

The TissueLyser III thoroughly disrupts and simultaneously homogenizes biological samples in the presence of a lysis buffer. Plant tissues can alternatively be disrupted and homogenized in the absence of a lysis buffer.

Tubes containing the sample and beads are placed in a TissueLyser Adapter Set and are shaken at a very high speed, causing the samples to be disrupted and homogenized by the beating and grinding effect of the beads. The tubes can be discarded after use to prevent cross-contamination and to save time, as there is no need to clean tubes after sample disruption. In addition, there is no cross-contamination during sample disruption as each tube is securely sealed with its own lid.

The TissueLyser III can also disrupt and homogenize large samples when used in combination with a Grinding Jar Set. Samples are placed in a 10 mL jar containing a grinding ball and shaken at high speed.

Procedure

Based on the adapter used during a run, the TissueLyser III can process up to 48 samples in 2 mL tubes or up to 192 samples in 96-well plates. Tubes and plates remain securely sealed during disruption to prevent cross-contamination. Depending on the sample type, disruption is carried out using stainless steel, zirconium, ceramic, or glass beads. The TissueLyser Bead Dispensers are available to conveniently deliver single beads into microcentrifuge tubes or to deliver 96 beads in parallel into collection microtubes. The TissueLyser III can also disrupt large samples when used in combination with Grinding Jar Sets.

Applications

The ability to process up to 192 samples per run makes the TissueLyser III the ideal front-end solution to access biological information for genomic, transcriptomic, and metatranscriptomic applications. For next-generation high-throughput sequencing technologies, the TissueLyser III is the disruption instrument of choice. A wide range of QIAGEN® sample purification kits are compatible with the TissueLyser III, and sample purification can be performed manually or can be automated using the QIAcube® Connect, QIAcube HT, QIAsymphony® SP, or EZ2® Connect.

Software

The TissueLyser III has 7 pre-programmed protocols and 5 customizable protocols for maximum sample versatility. The TissueLyser also allows you to create custom program cycles to conveniently set your disruption parameters.

Technical specifications

Disruption principle	High-speed shaking of samples from 1.2 mL collection tubes to 96-well plates with ceramic, stainless steel, or glass beads
Protocol/main application on this intrument	Seven pre-programmed protocols and five customizable protocols
Technical data	100–120/220–240 V, 50/60 Hz; variable disruption frequencies from 3 to 30 Hz (180–1800 oscillations/minute)
Kits compatible with instrument	All kits for purification of DNA and RNA
Protocol/main application on this intrument	Sample preparation/sample disruption
Throughput	2 × 96 collection microtubes (1.2 mL), 2 × 96-well plates (2 mL), 2 × 24 tubes (2 mL), 2 × 16 tubes (5 mL), 2 × 4 tubes (50 mL)
Features	Convenient and secure disruption process. Adapter sets optimized for high-throughput disruption. Wide range of accessories available (e.g., grinding jar set to process large samples). Reproducible results with difficult-to-lyse tissues. Front-end solution for QIAGEN automation.
Technology	Bead mill

Instrument dimensions and weight

Dimensions

Width	385 mm (15.6 in.)
Height	350 mm (13.8 in.)
Depth	470 mm (18.5 in.)

Weight

Approx. 27.5 kg (without TissueLyser Adapter Set or Grinding Jar Set installed)

Environmental conditions

Operating conditions

Power	100–240 V AC, 50/60 Hz, 185 W Mains supply voltage fluctuations are not to exceed 10% of nominal supply voltages
Overvoltage category	II
Operating temperature	5–40°C (41–104°F)*
Relative humidity	Maximum 80% (for temperatures up to 31°C; linearly decreasing down to a relative humidity of 50% at 40°C)
Altitude	Up to 2000 m (6500 ft.)
Place of operation	For indoor use only
Pollution degree	2

* The instrument can also be operated at 4°C under noncondensing conditions.

Transportation conditions

Air temperature	–25°C to 60°C (–13°F to 140°F) in manufacturer's package
Relative humidity	Maximum of 85% (noncondensing)

Storage conditions

Air temperature	5–40°C (41–104°F) in manufacturer's package
Relative humidity	Maximum of 85% (noncondensing)

Instrument service

QIAGEN Service Solutions offers a wide range of comprehensive service support products aiming to improve productivity and optimize performance in your laboratory. The services are provided by qualified QIAGEN specialists with fast response times.

Ordering information

Product	Contents	Cat. no.
TissueLyser III	TissueLyser III instrument for sample disruption	9003240
Accessories		
TissueLyser Adapter Set 2 × 24	Two sets of adapter plates and 2 racks for use with 2 mL microcentrifuge tubes on the TissueLyser III	69982
TissueLyser Adapter Set 2 × 96	Two sets of adapter plates for use with Collection Microtubes (racked) on the TissueLyser III	69984
Plate Adapter Set	Two sets of adapter plates for use with two 96-well plates on the TissueLyser III, compatible with the PowerBead Pro Plates	11990
5 mL Tube Adapter Set	For sample homogenization using 5 mL bead tubes on a TissueLyser III	11980
2 mL Tube Holder Set	For sample homogenization in 2 mL bead tubes on a TissueLyser III	11993
50 mL Tube Adapter Set	Two tube adapters for disruption in 50 mL bead tubes	11960
Grinding Jar Set, Stainless Steel (2 × 10 mL)	2 Grinding Jars (10 mL), 2 Stainless Steel Grinding Balls (20 mm)	69985
Grinding Jar Set, Teflon (2 × 10 mL)	2 Grinding Jars (10 mL), 2 Teflon Grinding Balls (20 mm)	69986
TissueLyser Single-Bead Dispenser, 5 mm	For dispensing individual beads (5 mm diameter)	69965
TissueLyser Single-Bead Dispenser, 7 mm	For dispensing individual beads (7 mm diameter)	69967
TissueLyser 3 mm Bead Dispenser, 96-Well	For dispensing 96 beads (3 mm diameter) in parallel	69973
TissueLyser 5 mm Bead Dispenser, 96-Well	For dispensing 96 beads (5 mm diameter) in parallel	69975
Stainless Steel Beads, 5 mm	200 stainless steel beads (5 mm diameter), suitable for use with TissueLyser systems	69989

Product	Contents	Cat. no.
Stainless Steel Beads, 7 mm	200 stainless steel beads (7 mm diameter), suitable for use with TissueLyser systems	69990
Tungsten Carbide Beads, 3 mm (200)	200 tungsten carbide beads (3 mm diameter), suitable for use with TissueLyser systems	69997

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at **www.qiagen.com** or can be requested from QIAGEN Technical Services or your local distributor.

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