Bioruptor® Pico

Elegant, Precise, Advanced

Your best shearing device

Dear Customer,

Thank you for choosing our device and for your confidence in Diagenode.

We have designed this device using our expertise in shearing so that it exceeds your expectations. This device will serve your research needs for many years and will provide the best experience with sample preparation.

INTENDED USE

The Bioruptor Pico is intended for laboratory use. It is not suitable for clinical use. Use of the Bioruptor Pico in any manner other than as directed herein could cause harm to persons and may void the warranty. Diagenode will not be responsible for injury or damage resulting from improper use of the Bioruptor Pico.

WARNING

Carefully read the following instructions before using your Bioruptor to avoid the risk of personal injury and damage.

- Do not use the Bioruptor Pico for anything other than its intended use.
- After removing the packaging, make sure that the Bioruptor Pico is intact.
- Do not use the Bioruptor Pico in a cold room.
- Do not turn the instrument to the ON position without water.
- Use deionized or distilled water.
- UltraPure/MilliQ water is not suitable.
- Do not tilt or jar the sonication unit.
- Do not exceed 30 minutes of total sonication (30 cycles of 30sec ON/30 sec OFF). Pause sonication for 15 minutes if longer sonication time needed.
- Do not allow the Bioruptor Pico to be used by untrained individuals.
- Do not use any accessories not recommended by Diagenode.
- Do not use the Bioruptor Pico if it is showing any sign of breakdown or malfunction.
- Do not attempt to dismantle or repair.
- Check the 'Good practices'  section in the 'Settings'  of your Bioruptor.

DESCRIPTION

TECHNICAL SPECIFICATIONS

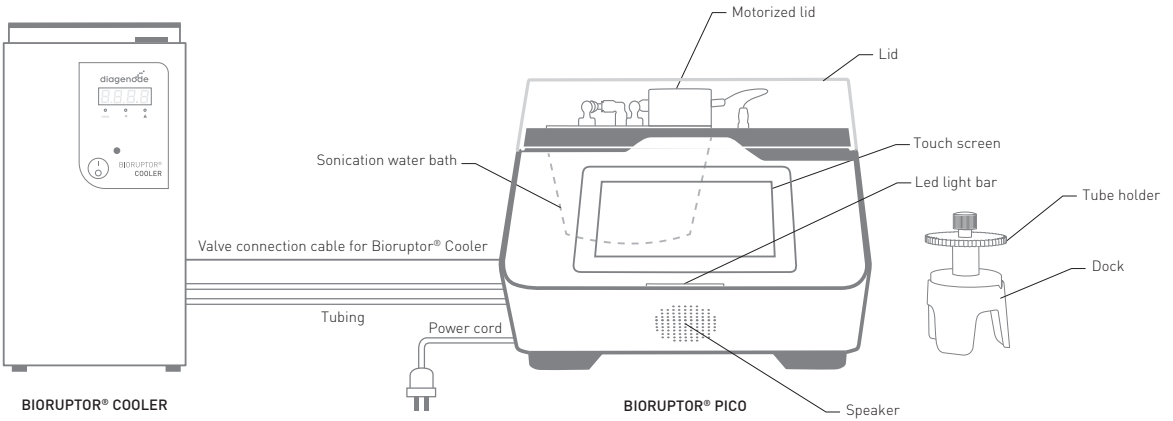
Input Voltage Range	100 – 240 V
Input Frequency Range	50-60 Hz
Maximum Electrical Consumption	4.2 A
Ultrasonic Wave Frequency	20 – 60 kHz
Unit Dimensions • The sonicator • The cooler	 380 (W) x 315 (D) x 275 (H) mm 200 (W) x 390 (D) x 495 (H) mm
Weight • The sonicator • The cooler	 9 kg 26.9 kg
Placement	Indoor areas
Ambient Temperature Range	15 – 25°C

Maximum Relative Humidity	80%
Altitude	Up to 2,000 meters
Degree of protection	IP31
Shearing Accessories	• Tube holder for 0.2 ml tubes *Cat. No. B01201144* • Tube holder for 0.65 ml tubes *Cat. No. B01201143* • Tube holder for 1.5 ml tubes *Cat. No. B01201140* • 15 ml sonication accessories *Cat. No. B01200016*

Shearing Consumables	• 0.2 ml Bioruptor Pico Microtubes *Cat. No. C30010020* • 0.65 ml Bioruptor Pico Microtubes *Cat. No. C30010011* • 1.5 ml Bioruptor Pico Microtubes *Cat. No. C30010016* • 15 ml Bioruptor Pico Tubes Cat. *No. C30010017* • 15 ml Bioruptor Pico Tubes & sonication beads *Cat. No. C01020031* • *Protein Extraction Beads Cat. No. C20000021*
Throughput	• 0.2 ml microtubes – 16 samples • 0.65 ml microtubes – 12 samples • 1.5 ml microtubes – 6 samples • 15 ml tubes – 6 samples

Sample Volume Range	• 0.2 ml microtubes – 20-100 µl • 0.65 ml microtubes – 100 µl • 1.5 ml microtubes – 100-300 µl • 15 ml tubes – 500 µl – 2 ml
Fragment Length Range Achievable	150 – 1,000 bp
Working Temperature Range	2 - 20°C
Variable Parameters	Time ON, Time OFF, # cycles, level of frequency
User Interface	Touchscreen with Bioruptor Pico software

DESCRIPTION



LED LIGHT BAR

The LED light bar allows the tracking of the processing of your samples.

The **blue light** means the system is waiting for the operator.

The **progressive green light** indicates the progression of the shearing process.

The **green light** indicates the end of the shearing process.

The **orange light** means the protocol is on pause.

The **red light** indicates an alert message.

DESCRIPTION

INTERFACE

Go & Shear: Start a new shearing protocol

User protocols: Record your protocol

Guidelines: Read Diagenode recommendations for your applications

Good Practices: Critical steps for Bioruptor maintenance and efficient shearing

Settings: Visualize and change the parameters of your Bioruptor Pico

Sound: Adjust the sound level

Brightness: Adjust the brightness of the screen

Language: Choose your voice language

Maintenance: Access for administrators

Information: General information about your Bioruptor Pico

Edit: Edit the parameter

Question mark: Some notes to guide you

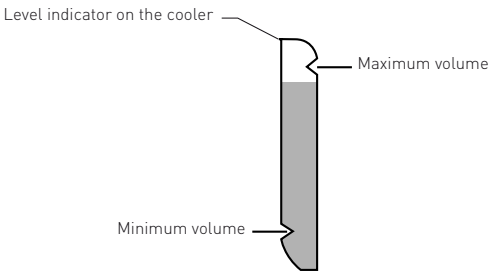
Diagenode dots: Go back to the top menu

Technical Support: Diagenode contact information for technical questions

Commercial Support: Diagenode contact information for commercial questions

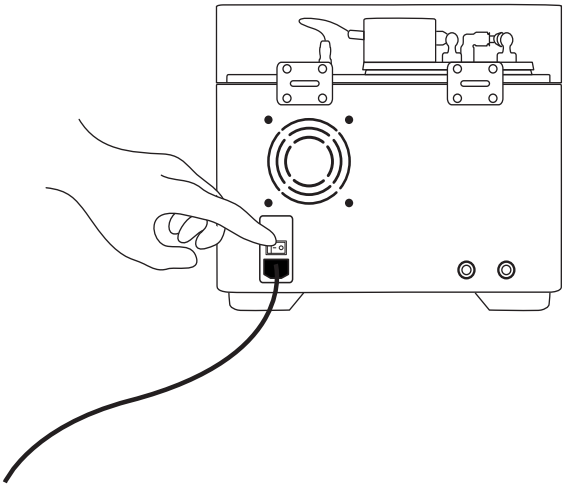
INSTRUCTIONS

1 **Check** if water is in the sonication water bath and the cooler

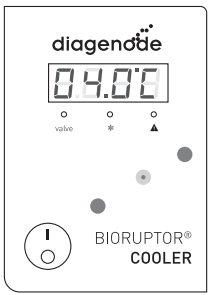


If not, **fill** the sonication water bath with ~ 700 ml of deionized or distilled water and the cooling system with 2-3 liters of deionized or distilled water.

2 **Start** the sonicator

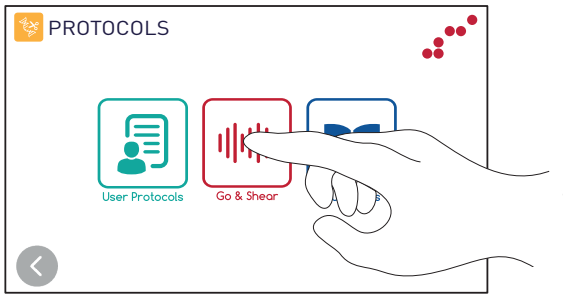


3 **Start** the cooling system, **set** the temperature to 4°C and **let** the water cool down



A. **Press** ENTER button to reach set point menu
B. **Select** a set point temperature (4°C) using the arrow buttons
C. **Press** ENTER button to apply the temperature

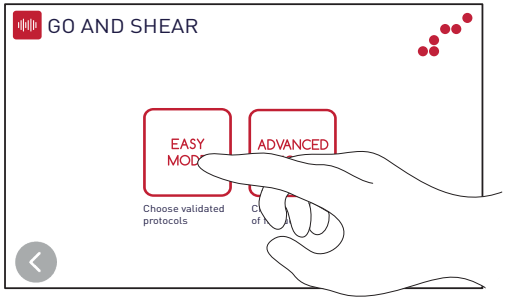
4 **Start** a new shearing experiment



Or find your pre-recorded shearing protocol on User protocols

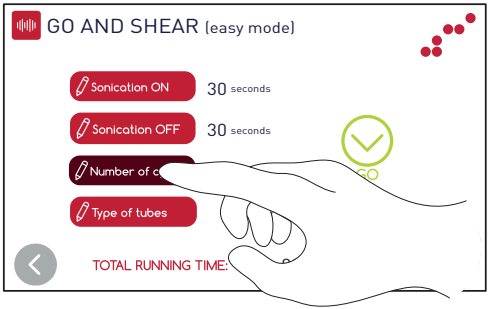
INSTRUCTIONS

5 **Select** your mode



Find validated parameters on the **Easy Mode** or optimize your protocol with different levels of frequency on the **Advanced Mode***.

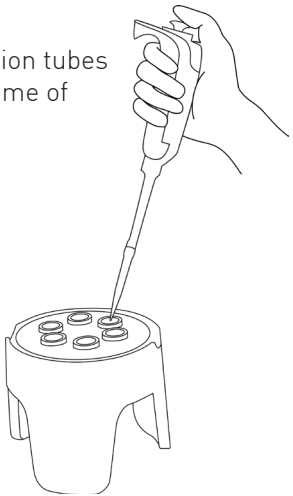
6 **Select** parameters (Time ON, Time OFF, # cycles, type of tube or level of frequency)*



*Visit our Guidelines folder to get recommendations for your application.

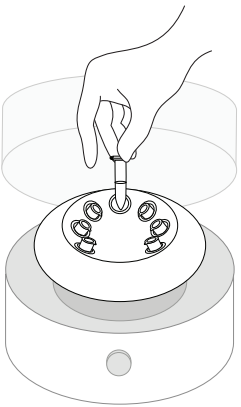
*Contact customer.support@diagenode.com for assistance with the Advanced Mode.

7 **Fill** the sonication tubes with same volume of sample*



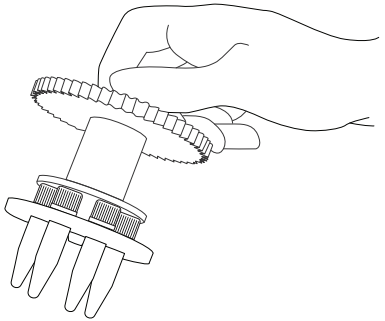
*Use the recommended tubes and sample volumes for optimal shearing efficiency. Visit our Guidelines folder for more information.

8 **Vortex** and then briefly **spin** your samples



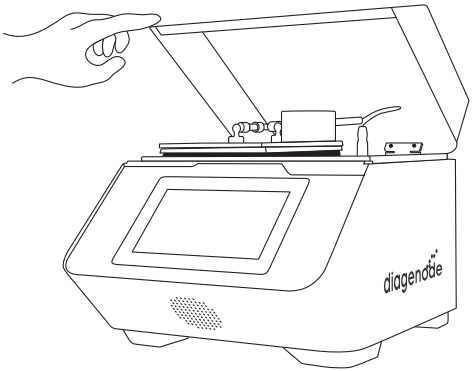
INSTRUCTIONS

9 **Fill** all positions of the tube holder with your samples* and **place** it on the motorized lid

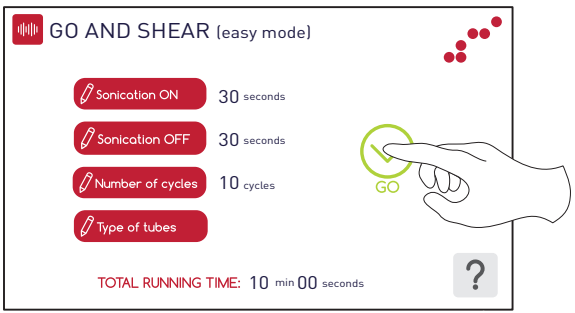


*or with water of same volume

10 **Close** the lid

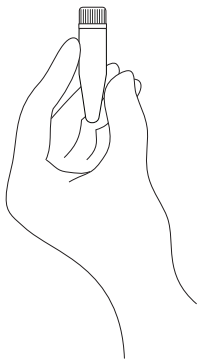


11 **Start** the protocol



12 **Let** your Bioruptor run

13 **Collect** your samples



GENERAL WARNINGS

DON'T

- Turn on the instrument without water
- Exceed 30 min of total sonication
- Tilt the sonication unit

DO

- Change water at least once every month
- Use deionized or distilled water
- QC your system with our Bioruptor QC Kit

If you have any questions, please contact a specialist at

www.diagenode.com/en/pages/support

EQUIPMENT CARE

The water bath must be filled with deionized or distilled water. Change water at least once every month and clean the sonication tank with a soft tissue. BUT be careful to not turn ON the instrument without water.

MANUAL

Read the full manual
"*https://www.diagenode.com/en/documents/bioruptor2-manual*"

SAFETY APPROVAL

Bioruptor® has been assessed and certified under the CE standards.

ENVIRONMENTAL PROTECTION

Packaging materials contain recyclable materials.

WARRANTY

Diagenode guarantees the Bioruptor Pico from any manufacturing defects as we rigorously test it to meet strict quality standards. Diagenode warrants that all standard components of the instrument will be free of defects in materials and workmanship for a period of five (5) years or for maximum 210 hours of total running time* from the date that the warranty period begins, unless the original quotation or accompanying documentation states a different warranty period. The warranty period begins on the date of delivery and apply only to the first purchaser of the product. The warranty period expires when one of the two above conditions ends (5 years or 210 hours of total running time*). If a manufacturing defect arises and a valid claim is received within the warranty period, Diagenode, at its discretion, will repair or replace the product in accordance with the warranty terms and conditions stated herein. In case of repair or replacement of a product under warranty, Diagenode will cover the expenses to return the repaired or replacement product.

This warranty covers only manufacturing defects and does not cover any damage caused by misuse, lack of compliance to recommendations stated in the manual, neglect, accidents, abrasion, or exposure to extreme temperatures, chemical solvents, or acids. Improper or incorrectly performed maintenance or repairs will void the warranty.

*The total running time corresponds to total sonication time ON + total sonication time OFF that compose the cycles of the shearing process.