

# Bioruptor<sup>®</sup> 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.
- Do not tilt or jar the sonication unit.
- Do not exceed 30 minutes of total sonication (total ON cycle).
- 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.

## TECHNICAL SPECIFICATIONS

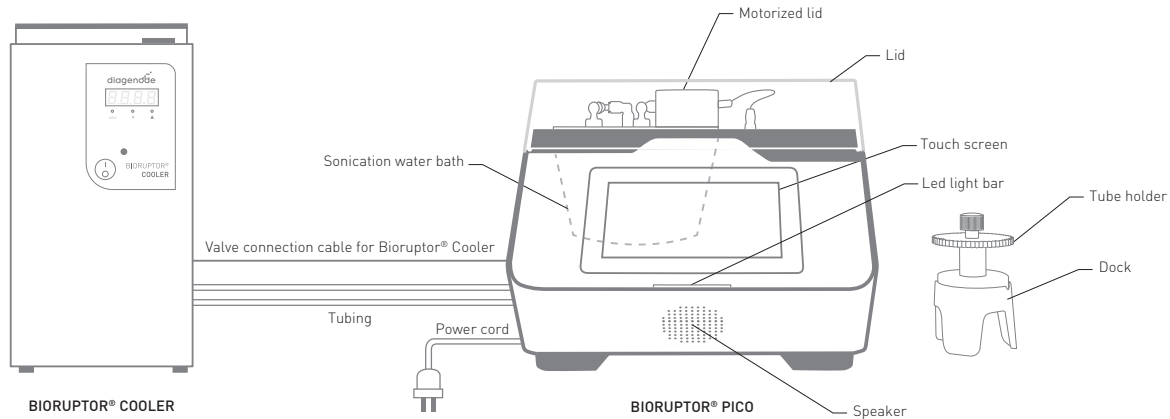
Input Voltage Range	100 – 240 V
Input Frequency Range	50-60 Hz
Maximum Electrical Consumption	4.2 A
Ultrasonic Wave Frequency	20 – 60 kHz
Unit Dimensions <ul style="list-style-type: none"> <li>• The sonicator</li> <li>• The cooler</li> </ul>	380 (W) x 315 (D) x 275 (H) mm 200 (W) x 390 (D) x 495 (H) mm
Weight <ul style="list-style-type: none"> <li>• The sonicator</li> <li>• The cooler</li> </ul>	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	<ul style="list-style-type: none"> <li>• Tube holder for 0.2 ml tubes <i>Cat. No. B01201144</i></li> <li>• Tube holder for 0.65 ml tubes <i>Cat. No. B01201143</i></li> <li>• Tube holder for 1.5 ml tubes <i>Cat. No. B01201140</i></li> <li>• 15 ml sonication accessories <i>Cat. No. B01200016</i></li> </ul>

<b>Shearing Consumables</b>	<ul style="list-style-type: none"> <li>• 0.2 ml Bioruptor Pico Microtubes <i>Cat. No. C30010020</i></li> <li>• 0.65 ml Bioruptor Pico Microtubes <i>Cat. No. C30010011</i></li> <li>• 1.5 ml Bioruptor Pico Microtubes <i>Cat. No. C30010016</i></li> <li>• 15 ml Bioruptor Pico Tubes <i>Cat. No. C30010017</i></li> <li>• 15 ml Bioruptor Pico Tubes &amp; sonication beads <i>Cat. No. C01020031</i></li> </ul>
<b>Throughput</b>	<ul style="list-style-type: none"> <li>• 0.2 ml microtubes – 16 samples</li> <li>• 0.65 ml microtubes – 12 samples</li> <li>• 1.5 ml microtubes – 6 samples</li> <li>• 15 ml tubes – 6 samples</li> </ul>

<b>Sample Volume Range</b>	<ul style="list-style-type: none"> <li>• 0.2 ml microtubes – 20-100 <math>\mu</math>l</li> <li>• 0.65 ml microtubes – 100 <math>\mu</math>l</li> <li>• 1.5 ml microtubes – 100-300 <math>\mu</math>l</li> <li>• 15 ml tubes – 500 <math>\mu</math>l – 2 ml</li> </ul>
<b>Fragment Length Range Achievable</b>	150 – 1,000 bp
<b>Working Temperature Range</b>	2 - 20°C
<b>Variable Parameters</b>	Time ON, Time OFF, # cycles, level of frequency
<b>User Interface</b>	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



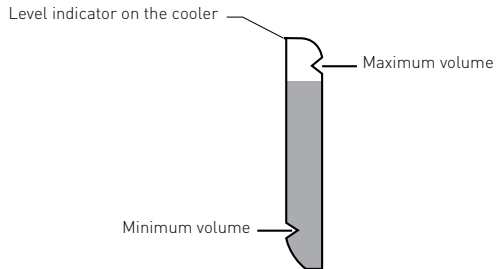
**Technical Support:** Diagenode contact information for technical questions



**Commercial Support:** Diagenode contact information for commercial questions

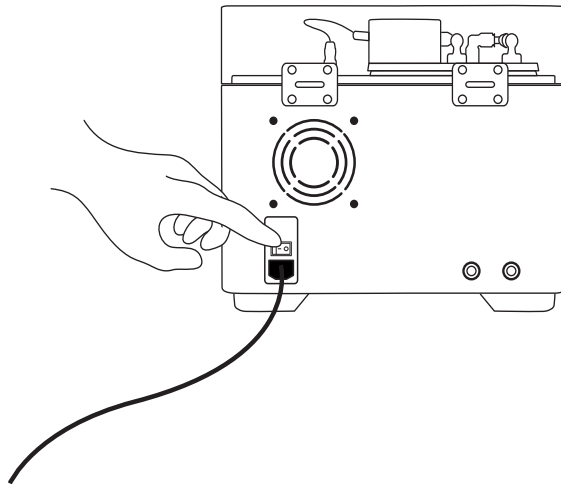
# INSTRUCTIONS

- 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

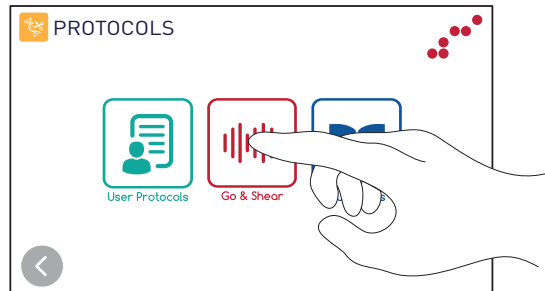



3 Start the cooling system, **set** the temperature to 4°C and **let** the water cool down



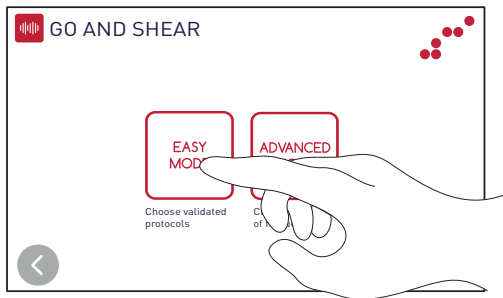
- A. **Press** ENTER button to reach set point menu
- B. **Select** a set point temperature (4°C) using the arrow buttons
- C. **Press** ENTER button to apply the temperature

4 Start a new shearing experiment



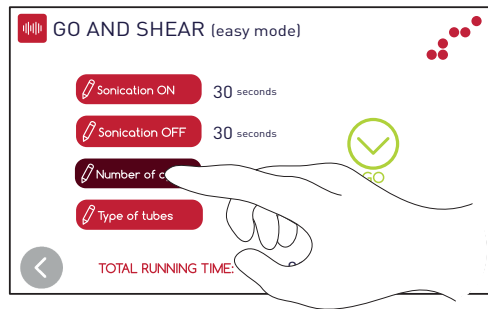
Or find your pre-recorded shearing protocol on User protocols 


## 5 Select your mode



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

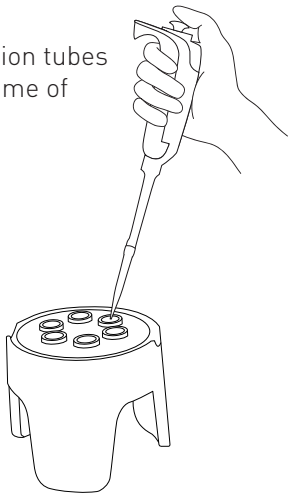
## 6 Select parameters (Time ON, Time OFF, # cycles, type of tube or level of frequency)\*




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

# 7

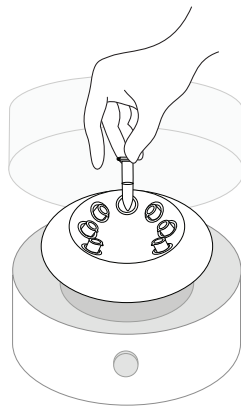
**Fill** the sonication tubes with same volume of sample\*



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

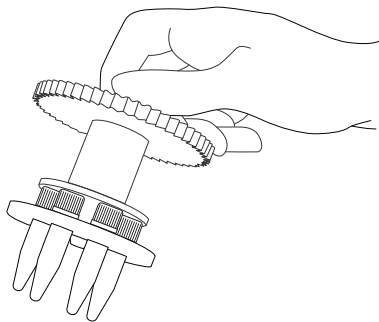
# 8

**Vortex** and then **spin** your samples



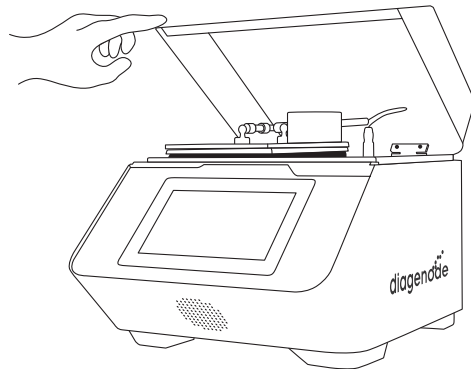
# INSTRUCTIONS

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

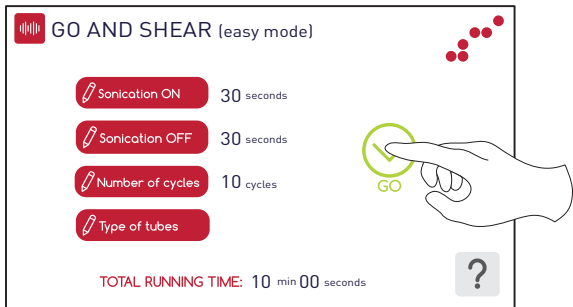


\*or with water of same volume

- 10** Close the lid



# 11 Start the protocol

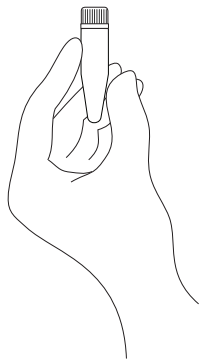


# 12 Let your Bioruptor run



# 13

**Collect** your samples







If you have any questions, please contact a specialist at  
[www.diagenode.com/en/pages/support](http://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"](https://www.diagenode.com/en/documents/bioruptor2-manual) - Tab Documents

## 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.



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