Oocyte Petri Electrode

User's Manual

15 mm Oocyte Petri Electrode, Platinum, 1 mm gap (electrode only)	**45-2059**
15 mm Oocyte Petri Electrode, Platinum, 1 mm gap, Kit (45-2059, 45-0503, 45-0204)	**45-2060**

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General Information

Warranty

BTX warranties this BTX Oocyte Petri Electrode for a period of 90 days from date of purchase. At its option, BTX will repair or replace the item if it is found to be defective as to workmanship or material. This warranty does not extend to damage resulting from misuse, neglect, or abuse, normal wear and tear,
or accident. This warranty extends only to the original customer purchase.

IN NO EVENT SHALL HARVARD APPARATUS BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, OR OF ANY OTHER NATURE.** Some states do not allow this limitation on an implied warranty, so the above limitation may not apply to you. If a defect arises within the 90 day warranty period, promptly contact: **BTX, 84 OCTOBER HILL ROAD, HOLLISTON, MASSACHUSETTS 01746-1388** using our toll free number **1-800-272-2775 (OUTSIDE THE U.S. CALL 1-508-893-8999).** Goods will not be accepted for return unless an RMA (Return Materials Authorization) number has been issued by our customer service department. The customer is responsible for shipping charges. Please allow a reasonable period of time for completion of repairs or replacement and return. If the unit is replaced, the replacement unit is covered only for the remainder of the original warranty period dating from the purchase of the original device. This warranty gives you specific rights, and you may also have other rights which vary from state to state.

NOTE: BTX electrodes are not recommended for use with power supplies or cables from other manufacturers. Such use is completely at the customer's own risk as it may result in damage, create unsafe conditions and will immediately void the 90 day warranty.

IMPORTANT: Read all instructions, warnings and precautions prior to use.

Technical & Customer Service

BTX® is the ultimate resource for technical information on the use of high voltage transfection and general electroporation of molecules and drugs into tissue. We constantly track and monitor scientific publications in this area. Our Technical Service group extracts and enters pertinent information, such as results and parameters from these papers into a Protocol database. This database is available via the BTX website. Please visit www.btxonline.com. For technical assistance, additional information or an inquiry/request for repair service, contact BTX Technical Support/Customer Service Group at:

BTX® A Division of Harvard Bioscience
84 October Hill Road
Holliston, MA 01746-1388 U.S.A.
Toll Free: 1-800-272-2775 (U.S. only)
Phone: 1-508-893-8999
Fax: 1-508-429-5732
E-mail: support@hbiosci.com
Internet: www.btxonline.com

If outside the United States and Canada: call 1-508-893-8999 or contact your nearest BTX Distributor. A complete list of distributors is on our website.

General Safety Information

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it. To avoid potential hazard, use this product only as specified. Only qualified BTX personnel should perform service procedures.

To Prevent Hazard or Injury:

ARCING CAN OCCUR AT HIGH VOLTAGES

An unfavorable combination of parameters such as high voltage settings and a small sample volume with a highly conductive medium might lead to flashover between the electrodes (ARC) and/or explosive evaporation of the medium. Reduce voltage or pulse length to avoid repeating this condition.

DO NOT OPERATE WITH SUSPECTED FAILURES

If you suspect there is damage to the product, have it inspected by qualified BTX service personnel.

DO NOT CONTACT ELECTRODES

To avoid fire or shock hazard, observe all ratings and markings on the product or in this manual before using the device.

AVOID EXPOSURE TO CONTACT

Do not insert fingers or try to remove electrode or sample during pulsing sequence.

WEAR PROPER EYE PROTECTION DURING ELECTROPORATION

DO NOT OPERATE IN AN EXPLOSIVE ENVIRONMENT

DO NOT OPERATE IN WET/DAMP CONDITIONS

Introduction

The Oocyte Petri Electrode is a reusable petri dish type of electrode specifically designed for drug or gene delivery into oocytes and/or zygotes. The Oocyte Petri Electrode is composed of two electrodes that are 3 mm wide by 15 mm long, polished medical grade platinum, arranged in parallel, with a 1 mm gap between them, and mounted on a glass petri dish. This electrode can be used with a microscope so that individual oocytes can be visualized during electroporation. This electrode is particularly useful for the generation of transgenic animals including use with CRISPR/Cas 9 constructs to both 'knock-in' and 'knock-out' targeted genes. The Oocyte Petri Electrode may be cleaned with a mild detergent and sterilized with 75% ethanol. This electrode requires the use of Mini Micro-Grabber Cables (45-0503) and Tweezertrode Adapter Cables (45-0204). This electrode is compatible with BTX ECM 830, Gemini X2, and ECM 2001+ Electroporation units.

**Note:* For compatibility with older models, call BTX Technical Support.

Important: Read all instructions, warnings and precautions prior to use.

FOR RESEARCH USE ONLY

Operation: Getting Started

WARNING: High Voltage

Make sure the BTX Electroporator is switched off before continuing.

1. Prior to use of electrode, spray with Rain-X and gently shake over platinum electrode surface of electrode for 10 seconds. Discard Rain-X. Sterilize Oocyte Petri Electrode by spraying three times with 75% ethanol, then drying with a Kimwipe. Rinse with sterile MilliQ water, then dry with a Kimwipe. Electrode is now ready to use.

   Note: Sigmacote may be used as an alternative to Rain-X to coat electrodes prior to use.

2. Connect the Mini Micro-Grabber cables to the Oocyte Petri Electrode, plug the banana cable into the Tweezertrode Adapter Cables and then connect the Adapter Cables into the voltage output of the BTX Electroporator.
3. Following instructions for the BTX Electroporator, set the appropriate parameters for electroporation.
4. Use a wide bore pipette tip to transfer oocytes or zygotes to the 1 mm gap between the two electrodes on the slide. Suggested fill volumes are 7 µl for 70 embryos and 10 µl for 100–120 embryos.
5. Deliver the electroporation pulse(s) to the sample.
6. Recover sample with wide bore pipette tip. During a session of multiple electroporations using the same transfectant, excess buffer may be removed with a sterile eye spear in between rounds of electroporation.
7. Disconnect from Mini Micro-Grabber cables and clean electrode by flushing with distilled water.
8. Sterilize Oocyte Petri Electrode by spraying with 75% ethanol three times and allow to dry.
9. Electrode is ready for next sample.
10. If finished with electroporation, remove Mini Micro-grabber cables from Oocyte Petri Electrode.
11. Gently flush electrode gap with a mild detergent and rinse with distilled water.
12. Dry electrode with 75% ethanol by flushing electrode with alcohol and gently shake any remaining drops.
13. Allow to air dry until no alcohol is seen and store with glass cover in a dry area.

Specifications

Oocyte Petri Electrode Electrical & Technical Specifications
Standard Capabilities:
Voltage Range 0 to 200 VDC (Do not use AC current)
Pulse Length Range 10 µsec to 10 sec
Pulse Number Range 1 to 99 (depending on voltage)
Operating Temperature 5º to 40ºC
Indoor use only
Relative Humidity 20 to 80%

Physical Characteristics:			
Item No.	Electrode Length	Electrode Gap	Electrode Material
45-2059	15 mm	1 mm	Medical Grade Polished Platinum

Compatibility:	
Generators	BTX Gemini X2, ECM 830, ECM 2001+

Troubleshooting

Please contact BTX Technical Service at any of the numbers listed below in the event of any failure.

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