making a difference

INSTRUCTIONS FOR USE



DOMINIQUE DUTSCHE

CRYO.S 6-CHANNEL HANDHELD DECAPPER

Item No.: 852076 -NA/ -UK/
-EU/ -AU/ -JP/ -CN

www.gbo.com

greiner
BIO-ONE



DOMINIQUE DUTSCHER

CE

IMPORTANT NOTICE:

This manual may not be used or reproduced in any way whatsoever without the express written consent of Greiner Bio-One GmbH. The Greiner Bio-One GmbH address can be found on the last page. Greiner Bio-One GmbH is responsible for this operator's manual.

Copyright © 2023 Greiner Bio-One GmbH, All Rights Reserved.

INSTRUCTION MANUAL

INTRODUCTION:

This manual helps users operate the Cryo.s 6-Channel Handheld Decapper correctly and safely, herein referred to as the Decapper. To achieve this goal, the manual describes the different components of the Decapper and their functionality.

After introducing you to the various parts of the Decapper, the manual will describe step by step how to operate the Decapper. After you have read through this manual, you should be capable of operating the Decapper.

In order to prevent injury to personnel and damage to equipment the manual contains the following precautionary statements:

WARNING

The WARNING statement describes a potentially hazardous situation which if not avoided could result in serious injury of personnel and damage to equipment.

CAUTION

The CAUTION statement describes a potentially hazardous situation which if not avoided could result in damage to equipment and minor injury.

NOTICE

The NOTICE statement indicates information considered important but not hazard related.

FURTHER INFORMATION:

Animated Video of the Handheld Decapper available here.

The animated demonstration provides a brief overview of how to utilize the decapper in just a few seconds, but it does not serve as a substitute for the comprehensive Instruction for Use.

DOMINIQUE DUTSCHER

TABLE OF CONTENT:

/ 1. Information about Intended Use, Safety and Security 6
- 1.1. Disclaimer Statement 6
- 1.2. Intended Use 6
- 1.3. Legal Regulations 7
- 1.4. Malfunction / Troubleshooting 8
- 1.5. Precautions and Safety 8
  - 1.5.1. Maintenance, Service and Repair 8
  - 1.5.2. Operating the Instrument 8
  - 1.5.3. Electrical Safety Precautions 9
  - 1.5.4. Hazards 9
  - 1.5.5. Safety Measures 10
  - 1.5.6. Reporting Serious Incidents 10

/ 2. Decapper Introduction 11
- 2.1. Decapper Design Overview 11
- 2.2. Concept Overview 12

/ 3. Installation and Set-up 13
- 3.1. Shipment 13
- 3.2. Hardware Installation 13
  - 3.2.1. Power Cable Connection 13
  - 3.2.2. Docking the Decapper 14
  - 3.2.3. Disposal of Shipment Materials 14

/ 4. Working with the Decapper 14
- 4.1. Decapping Tubes 14
- 4.2. Storing Caps 15
- 4.3. Capping Tubes 15
- 4.4. Ejecting Caps 15
- 4.5. Wireless Operation 16
- 4.6. Charging 17
- 4.7. Adjusting Capping Torque 18

/ 5. Ordering Information 20

/ 6. Troubleshooting 21

DOMINIQUE DUTSCHER

/ 7. Cleaning Maintenance 22
7.1. Materials Required 22
7.1.1. Cleaning Agents 22
7.2. Cleaning Parts of the Instrument 23

/ 8. Technical Speficiations 23

/ 9. Declaration of Conformity 24

/ 10. Compliance with the European Union's Waste Electrical & Electronic Equipment Directive 25

/ 11. RoHS Compliance 25

/ 12. Standard Warranty 25

DOMINIQUE DUTSCHER

1/ INFORMATION ABOUT INTENDED USE, SAFETY AND SECURITY

This User's Manual is designed to help you get the most out of your Decapper.



NOTICE

You should carefully read through the entire manual before beginning to operate your Decapper. This first section must be read with attention. It contains important information about the use of the Decapper and this manual.

1.1/ DISCLAIMER STATEMENT

This user manual is designed to provide guidance and information for users who are working with the Decapper. It covers the most encountered procedures, handling techniques, and safety considerations for daily use. Please note that the content of this manual is subject to change without notice, as Greiner Bio-One GmbH continues to develop new products, accessories, and software. It is important to recognize that this manual may not be comprehensive in its explanations, instructions, or statements, and may not reflect the most current information available. Some illustrations, images, and descriptions may also be incomplete or vary from the actual product received. Our goal is to provide the most accurate and up-to-date information possible, but we cannot guarantee its completeness or accuracy.

1.2/ INTENDED USE

The Decapper provides a fast and robust method to cap and uncap Cryo.s non-coded Tubes and Cryo.s with Barcode and Datamatrix Code in SBS 48-format racks. A list of compatible products from Greiner Bio-One GmbH is provided hereinafter.

The Decapper is a handheld standalone instrument designed to quickly and reliably decap and cap six tubes in parallel. The device will be used in conjunction with a docking station for storage and charging when not in use.

DOMINIQUE DUTSCHER

Item No.	Description
123263	Cryo.s non-coded tubes, 1 ml, starfoot base, internal tube thread
122263	Cryo.s non-coded tubes, 2 ml, starfoot base, internal tube thread
126263	Cryo.s non-coded tubes, 2 ml, starfoot base, external tube thread
127263	Cryo.s non-coded tubes, 4 ml, starfoot base, external tube thread
123263-2DG	Cryo.s non-coded tubes, 1 ml, starfoot base, internal tube thread, linear barcode, human readable identifier and datamatrix code
122263-2DG	Cryo.s non-coded tubes, 2 ml, starfoot base, internal tube thread, linear barcode, human readable identifier and datamatrix code
126263-2DG	Cryo.s non-coded tubes, 2 ml, starfoot base, external tube thread, linear barcode, human readable identifier and datamatrix code
127263-2DG	Cryo.s non-coded tubes, 4 ml, starfoot base, external tube thread, linear barcode, human readable identifier and datamatrix code
803202	48-format Rack for Cryo.s , low profile for 1 and 2 ml Cryo.s
803270	48-format Rack for Cryo.s , high profile for 4 ml Cryo.s
803202-2DG	48-format Rack for Cryo.s , low profile for 1 and 2 ml Cryo.s , linear barcode, human readable identifier and datamatrix code
803270-2DG	48-format Rack for Cryo.s , high profile for 4 ml Cryo.s , linear barcode, human readable identifier and datamatrix code
803507	48-format Cap Carrier

In addition, the Decapper may be used with Cryo.s non-coded Tubes and Cryo.s with Barcode and Datamatrix Code with coloured screw cap versions as well as customized barcodes (REF 12x2xx, 12x2xx-2dx).

1.3/ LEGAL REGULATIONS

All local, state and federal laws which prescribe the use, application, and/or the handling of dangerous materials in connection with the Decapper must be strictly followed.

DOMINIQUE DUTSCHER

1.4/ MALFUNCTION / TROUBLESHOOTING

Refer to the section: **6 Troubleshooting/page 21.**



NOTICE

For a malfunction and for troubleshooting the Decapper, contact your local Greiner Bio-One representative.

1.5/ SAFETY PRECAUTIONS



NOTICE

Read the following safety notices carefully before using the Decapper

1.5.1/ MAINTENANCE, SERVICE AND REPAIR

Only trained contractual partners of Greiner Bio-One are authorized to perform mechanical repair on the Decapper.

1.5.2/ OPERATING THE INSTRUMENT

When using the Decapper, Good Laboratory Practices (GLP) must be observed. Suitable protective clothing, safety glasses and protective gloves must be worn.



WARNING

During Decapper operation, keep clear of all moving parts. Never interfere with the Decapper while it is in operation!



CAUTION

If the Decapper is used in a manner not specified by Greiner Bio-One, the protection provided by the device may be impaired.

DOMINIQUE DUTSCHER

1.5.3/ ELECTRICAL SAFETY PRECAUTIONS

There are no electrical components that are accessible to the user in the Decapper.



WARNING

Any removal of the housing to access internal components must only be performed by contractual partners of Greiner Bio-One.

1.5.4/ HAZARDS

The following section describes the main safety considerations, electrical and biological, in operating this product and the main hazards involved.



CAUTION

Only authorized personnel may have access to the device. The laboratory or operator of the instrument is responsible for ensuring that the environmental conditions for safe operation of the Decapper are always met. The laboratory or operator is responsible for any improper handling. It must be ensured that untrained or unauthorized personnel cannot manipulate or interfere with the Decapper while it is in use.

DOMINIQUE DUTSCHER

1.5.5/ SAFETY MEASURES

CAUTION

Use appropriate protective clothing, goggles and gloves!



1.5.6/ REPORTING SERIOUS INCIDENTS

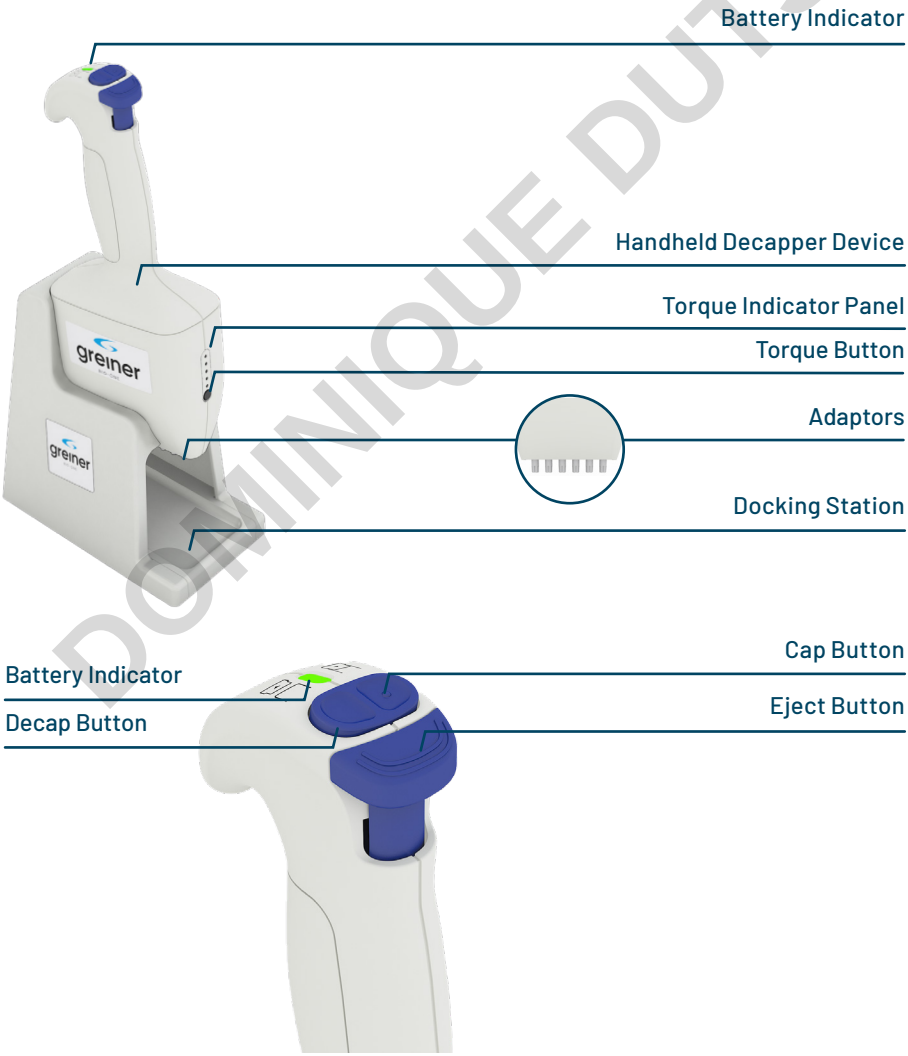
Any serious incident or near incident that has occurred in relation to the Decapper shall be reported to Greiner Bio-One and to the competent authority of the member state in which the operator is established. Contacting Greiner Bio-One either by contacting a local Greiner Bio-One representative or by utilizing the Greiner Bio-One webpage, which can be found on the last page of this operating manual.

DOMINIQUE DUTSCHER

2/ DECAPPER INTRODUCTION

2.1/ DECAPPER DESIGN OVERVIEW

The following picture depicts the main components of the Decapper.



DOMINIQUE DUTSCHER

2.2/ CONCEPT OVERVIEW

The Decapper provides a precise method for processing six tubes in parallel. An integrated torque control panel allows to pre-set torque levels. For details on torque setting please refer to **4.7 Adjusting Capping Torque/ page 18.**

NOTICE

For Greiner Bio-One's cryogenic tubes with internal and external threads, torque pre-setting levels 4 and 5 (4/5 green LEDs lit up) were found to be optimal, respectively.

The docking station and integrated re-chargeable battery provide the convenience of wireless operation with ease of use for charging integration into your workflow. The Decapper is an intuitive and ergonomic device, designed to simplify your capping and decapping processes.

The Decapper comprises the following functions:

- **Adjustable torque control**
- **Wireless operation**
- **Magnetic docking station**
- **Supports SBS-format tube racks**

To guarantee proper tube capping and decapping with the Decapper, it is necessary to fulfil the following functions:

1. **Tubes must be presented in complementary SBS 48-format racks.**
2. **The cap button must be depressed to actuate the motors to rotate counter-clockwise.**
3. **The decap button must be depressed to actuate the motors to rotate clockwise.**
4. **The torque button must be depressed to change the applied capping torque.**
5. **The eject button must move the ejector block vertically to detach adaptors from caps**

DOMINIQUE DUTSCHER

3/ INSTALLATION AND SET-UP

These instructions allow operators to independently install the Decapper device into their workspace.

3.1/ SHIPMENT

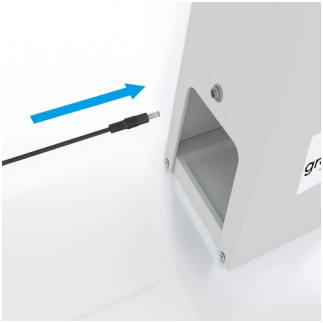
Your delivery consists of the following items:

- **Decapper device**
- **Docking station**
- **Power cord & power adaptor**
- **Adaptors (pre-installed)**
- **Adaptors case**
- **Manual**
- **Quick start guide**

3.2/ HARDWARE INSTALLATION

3.2.1/ POWER CABLE CONNECTION

Connect the power cable as shown in the area on the docking station indicated by the arrow



DOMINIQUE DUTSCHER

3.2.2/ DOCKING THE DECAPPER

Before initial use the Decapper should be fully charged. After removal from packaging, the Decapper should be placed in the Docking Station until a full charge is indicated.



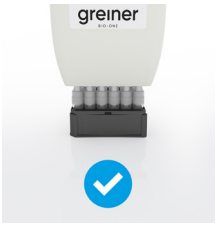
3.2.3/ DISPOSAL OF SHIPMENT MATERIALS

It is the customer's responsibility for the care and disposal of all packaging materials.

4/ WORKING WITH THE DECAPPER

4.1/ DECAPPING TUBES

Fully insert the adaptors into the inner cavities of the six corresponding caps by firmly pressing the Decapper down. The ejection block should be flush with the tops of the tubes. Press and hold the decap button to start the decapping operation. During decapping, press the device down. While decapping, slowly move the device upwards.



Correct



Incorrect



Decapping

DOMINIQUE DUTSCHER

NOTICE

Ensure the ejection block is parallel and flush to the caps so that caps are retained properly.

4.2/ STORING CAPS

Caps can stay on the adaptors during pipetting or other aspects of your workflow. The device can be placed in the docking station while not in use. Alternatively, the caps can be ejected into a cap carrier. To dock the device, simply place the Decapper into the docking station and slide it firmly to the back. When installed properly the status LED should display a charging or battery full status.

NOTICE

The Greiner Bio-One Cap Carrier in 48-format REF 803507 can be used as a cap holder for Cryo.s non-coded Tubes and Cryo.s with Barcode and Datamatrix Code. These Cap Carriers are not included with the tubes and must be purchased separately.

4.3/ CAPPING TUBES

Position the device with the attached screw caps directly above the tube openings. Gently press the device down while holding the cap button to begin the capping process. Continue pressing downwards on the tube while holding the cap button until the rotation of all adaptors come to a complete stop.

NOTICE

After capping, carefully check that screw caps are applied correctly, with no protruding caps or squeezed-out sealing gaskets. This semi-automatic device requires manual visual inspection to identify and correct rare cases of improper sealing.

4.4/ EJECTING CAPS

When done capping a row of tubes, release pressure on the device and press the eject button until you feel the device lift off the plate. Press the eject button completely down to ensure the caps are fully unseated from the adaptors.

DOMINIQUE DUTSCHER

4.5/ WIRELESS OPERATION

The Decapper only operates wireless. The battery indicator will display the battery status when in use. This will remain on for ~15 seconds after either the cap or decap buttons have been pressed. The below table shows the power status levels displayed by the Decapper. The power indicator will also flash every ~8 seconds while the device is not in use.

Colour	Battery Status	Appearance
Solid green	Good battery level.	
Solid yellow	Battery level low. Charge when possible.	
Solid red	Critical battery level. Device is disabled. Charge immediately.	

DOMINIQUE DUTSCHER

4.6/ CHARGING

When not in use, place the device in the docking station to automatically charge. The power indicator will indicate the charging state of the device when properly installed. The motors are disabled, and the device cannot be used while in the docking station. The below table shows the charging status indicators.

Colour	Battery Status	Appearance
Solid blue	Fully charged.	
Flashing green	Actively charging.	
Flashing red	Charging error.	

DOMINIQUE DUTSCHER

4.7/ ADJUSTING CAPPING TORQUE

The Decapper comes programmed with 5 pre-set torque levels. Press the torque button once to light up the torque indicator panel. The number of LEDs lit up indicates the set torque level. To change the level, press the torque button within 2 seconds to increment the torque level by one. Repeat the previous step until the desired torque level is reached. After reaching level 5, the torque will cycle to level 1. The below table shows the torque level and the approximate capping torque applied at that level.

NOTICE

Torque pre-setting **level 4** (four green LEDs of the torque indicator lit up) was found optimum for capping Greiner Bio-One's Cryo.s non-coded Tubes and Cryo.s with Barcode and Datamatrix Code with **internal** thread.

Torque pre-setting **level 5** (five green LEDs of the torque indicator lit up) was found optimum for capping Greiner Bio-One's Cryo.s non-coded Tubes and Cryo.s with Barcode and Datamatrix Code with **external** thread.

Torque Level Indicator	Capping Torque	Display
1	70 mNm ± 10 mNm	
2	90 mNm ± 10 mNm	
3	120 mNm ± 10 mNm	

DOMINIQUE DUTSCHER

Torque Level Indicator	Capping Torque	Display
4	200 mNm ± 10 mNm	
5	250 mNm ± 10 mNm	

NOTICE

Do not apply too high torque levels as this may destroy the thread on the tube and tubes may not be closed properly any longer. Leakage may occur.

DOMINIQUE DUTSCHER

5/ ORDERING INFORMATION

The following article numbers are for 6-channel decappers, each with an included charging cable featuring a region-specific plug for countries and their associated regions with the same plug standard: European Union (EU), United Kingdom (UK), North America (NA), Japan (JP), China (CN), Australia (AU).

Item No.	Description
852076-EU	CRYO.S DECAPPER, 6 CHANNEL, EU VERSION, FOR CRYO.S TUBES, 1 UNIT PER CASE
852076-UK	CRYO.S DECAPPER, 6 CHANNEL, UK VERSION, FOR CRYO.S TUBES, 1 UNIT PER CASE
852076-NA	CRYO.S DECAPPER, 6 CHANNEL, US VERSION, FOR CRYO.S TUBES, 1 UNIT PER CASE
852076-JP	CRYO.S DECAPPER, 6 CHANNEL, JP VERSION, FOR CRYO.S TUBES, 1 UNIT PER CASE
852076-CN	CRYO.S DECAPPER, 6 CHANNEL, CN VERSION, FOR CRYO.S TUBES, 1 UNIT PER CASE
852076-AU	CRYO.S DECAPPER, 6 CHANNEL, AU VERSION, FOR CRYO.S TUBES, 1 UNIT PER CASE

DOMINIQUE DUTSCHER

6/ TROUBLESHOOTING:

If any issues arise when using the Decapper use the below guide to help diagnose any problems your device might have.

Problem	Description	Solution
Adaptors do not spin	No/low battery power	Charge device
	Installed in dock/charging	Remove from dock before use
	Faulty battery	Contact Greiner Bio-One
Overtighten/ damaged vials	Incorrect torque setting	Adjust torque level
	Incorrect torque setting	Contact labware manufacturer
Under tightened/ unsealed vials	Incorrect torque setting	Adjust torque level
	Worn out labware	Replace labware
	Incorrect torque setting	Contact labware manufacturer
Flashing red while charging	Battery overheated	Allow cooldown
	Battery connection fault	Contact Greiner Bio-One
Single Adaptor does not spin	Motor Failure	Contact Greiner Bio-One
	Manifold/Gearing failure	Contact Greiner Bio-One
Caps fall off adaptors	Insufficient retention force	Press down with device during entire decapping process
	Incorrect adaptors	Only use device with approved labware/adaptor pairings
	Worn out labware	Replace labware
Adaptor does not compress	Damaged adaptor	Replace adaptor
	Damaged spindle	Contact Greiner Bio-One
No charging indicator	Improperly seated	Reseat device
	No power	Check power connector

DOMINIQUE DUTSCHER

7/ CLEANING MAINTENANCE

When necessary, the Decapper can be cleaned.

7.1/ MATERIALS REQUIRED

- **Disposable nitrile or latex gloves**
- **Protective glasses**
- **Lab coat**

7.1.1/ CLEANING AGENTS

According to the degree of contamination, the following cleaning agents are suitable for cleaning parts of the Decapper. It is recommended to clean only the described part.

Cleaning Agent	Concentration	Risk to Decapper	Additional Comments
Water	Distilled or de-ionized water	-	-
Alcohol	70% ethanol, 70% 2-Propanol (isopropanol)	No risk during short exposure times	-
Detergents	Mild detergent, special detergents	Check with vendor of the agents	-
Tissue	-	-	Use only lint-free tissues.

CAUTION

Follow the manufacturer's instructions when using cleaning, disinfecting, and decontaminating fluids. Avoid disinfecting materials that contain hypochlorite (such as Javel water or Chlorox) or bleaching fluids. Always prepare disinfectant fluids as directed on their labelling.

DOMINIQUE DUTSCHER

7.2/ CLEANING PARTS OF THE INSTRUMENT

Instrument Part	Cleaning Agent
Adaptors	Alcohol
Device Housing	Detergent/ Alcohol
Ejection Block	Detergent/ Alcohol
Docking Station Housing	Detergent/ Alcohol

NOTICE

Cleaning procedures others than described are not recommended and may destroy the device e.g., washing of carriers in washing machines, autoclaving of instrument components, etc.

8/ TECHNICAL SPEFICIATIONS

	Width	Depth	Height
Dimensions	114 mm (4.48 in)	60 mm (2.36 in)	255 mm (10.04 in)
Weight of Decapper w/o Docking Station:	1.3 lb		
Supported Labware:	Greiner Bio-One Cryo.s non-coded Tubes and Cryo.s with Barcode and Datamatrix Code in 48-format racks		
Power Adapter:	Input:	100 VAC to 240 VAC Auto switching	
	Frequency:	50 Hz to 60 Hz	
	Output:	12 VDC	
	Power:	4 A	
Description	Description:	Lithium Polymer	
	Capacity:	2500 mA*hr	
	Nominal Output:	7.4 VDC	
Operating Conditions:	Temperature:	50 °F to 86 °F (10 °C to 30 °C)	
	Relative Humidity:	10% - 90% non-condensing	
Recommended Storage Conditions:	Temperature:	32 °F to 86 °F (0 °C to 30 °C)	
	Relative Humidity:	40% to 70% non-condensing	

DOMINIQUE DUTSCHER

9/ DECLARATION OF CONFORMITY

CE conformity is issued and maintained for the Decapper. See the Declaration of Conformity provided with the instrument as well as the information in the following sections. The Decapper is designed and built-in compliance with safety and health requirements of applicable EC Directives. With the declaration of conformity, the manufacturer declares conformity with the provisions of the directives.

		EG-KONFORMITÄTSERKLÄRUNG	Page 1 of 1
Drawn Date Revision	S. Kälberer April 25, 2023 03	EC DECLARATION OF CONFORMITY	greiner BIO-ONE

Greiner Bio-One GmbH
Maybachstr. 2
D-72636 Frickenhausen
Germany

erklärt hiermit, dass das bezeichnete Gerät(e) den einschlägigen grundlegenden Anforderungen der aufgeführten EG-Richtlinien und Normen entspricht. Bei einer nicht mit uns abgestimmten Änderung des Produktes oder einer nicht bestimmungsgemäßen Anwendung verliert diese Erklärung ihre Gültigkeit.

hereby declares that the device(s) named below fulfills the relevant fundamental requirements of the EC directives and standards listed. In the case of unauthorized modifications to the device or an unintended use this declaration becomes invalid.

Produktbezeichnung / *Product Description*:

Cryo.s 6-Channel Handheld Decapper

Artikelnummer / *Part No.*:

852076-EU	852076-CN
852076-UK	852076-AU
852076-NA	852076-JP

Einschlägige EG-Richtlinien / *Relevant EC Directives*:

EU Directive for Waste Electrical & Electronic Equipment (WEEE) 2012/19/EU, respective symbology on device
Machinery Directive 2006/42/EC, Supplement II A
Electromagnetic Compatibility Directive 2014/30/EU
RoHS II Directive 2011/65/EU

Normen / *Harmonized Standards*:

EN55011, Class A - Emissions testing
FCC Part 15 Class A – Radiated and conducted Emission
VCCI/CISPR 32, Class A – Radiated and conducted Emissions to VCCI/CISPR 32
AS CISPR 11, Class A – Radio-frequency equipment
ICES-003, Class A –Technology Equipment

EN IEC 61326-1 - Electrical equipment for measurement, control and laboratory
EN61000-4-2 – Electrostatic Discharge
EN61000-4-3 – Radiated Immunity
EN61000-4-8 – Magnetic Field
EN61010-1 – Safety requirements for electrical equipment

Datum / *Date*: 27 April 2023

Dr. Chen-Ket Chai
Director Quality Management

Phone: +49 7022 948-0 Fax: +49 7022 948-514 Email: info@de.gbo.com

DOMINIQUE DUTSCHER

10/ COMPLIANCE WITH THE EUROPEAN UNION'S WASTE ELECTRICAL & ELECTRONIC EQUIPMENT DIRECTIVE

To adhere to the European Union's WEEE Directive 2002/96/EC, this product is labelled with a specific symbol. If you are in Europe, you can return the product free of charge by contacting your local Greiner Bio-One representative for information on the disposal process. However, items classified as biohazardous or medically contaminated cannot be recycled through this program and must be disposed of as biohazardous waste in compliance with the proper protocols.



11/ ROHS COMPLIANCE

The Decapper follows RoHS II Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS II) and its amendments.

12/ STANDARD WARRANTY

The warranty for the Decapper lasts for 12 months from the date of sale. If a customer discovers a defect or problem caused by bad materials, faulty design, or poor workmanship, they can request a repair or replacement in writing. Greiner Bio-One will choose whether to repair or replace the defective parts, and any replaced parts become the property of the company. However, the warranty does not cover consumable parts, damage from normal wear, improper maintenance, failure to follow operating instructions, or any reasons for which Greiner Bio-One is not responsible. The customer is not entitled to any additional rights or claims beyond what is explicitly stated in this clause regarding defective materials, design, workmanship, or unfulfilled warranties. Customers can contact their Greiner Bio-One representative to request free repairs within the warranty period.

DOMINIQUE DUTSCHER

making a difference

www.gbo.com

GREINER BIO-ONE GMBH
FRICKENHAUSEN, GERMANY

PHONE +49 7022 948-0
FAX +49 7022 948-514
E-MAIL info@de.gbo.com

GREINER BIO-ONE IS A GLOBAL PLAYER.
FIND THE CONTACT DETAILS OF YOUR LOCAL PARTNER ON OUR WEBSITE.

Devices of Greiner Bio-One are to be used by properly qualified persons only in accordance with the relevant Instructions for Use (IFU), where applicable.
For more information contact your local Greiner Bio-One sales representative or visit our website (www.gbo.com).
All information is provided without guarantee despite careful processing.
Any liability, warranty or guarantee of Greiner Bio-One GmbH is excluded.
All rights, errors and changes are reserved. If not stated otherwise, Greiner Bio-One GmbH has all copyrights and/or other (user-)rights in this documents, in particular to signs such as the mentioned (word-picture-)brands and logos. Any use, duplication or any other use of the rights of Greiner Bio-One GmbH is expressly prohibited.

Media owner: Greiner Bio-One GmbH / Represented by Managing Directors Bernd Klingel. The company is registered in the Commercial Register at the first instance court in Stuttgart, HRB 224604 / VAT Number: DE812585719.

greiner BIO-ONE

F071084 en [rev.01 10.2023]

DOMINIQUE DUTSCHE