

INTEGRA



PIPETBOY pro Operating instructions

INTEGRA



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INTEGRA Biosciences AG – 7205 Zizers, Switzerland

declares on its own responsibility that the product | erklärt in alleiniger Verantwortung,
dass das Produkt | déclare sous sa responsabilité exclusive, que le produit |
declara bajo su propia responsabilidad que el producto | dichiara sotto la propria
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PIPETBOY pro **Models: 156400, 156401, 156402, 156403, 156404**

in accordance with EC directives | gemäss der EU-Richtlinien | est conforme au terme de
la directives CE | de acuerdo con las directivas CE | in conformità alle direttive CE

2006/95/EC	Low voltage equipment
2004/108/EC	Electromagnetic compatibility
2002/95/EC	Restriction of Hazardous Substances
2002/96/EC	Waste Electrical and Electronic Equipment

is in compliance with the following normative documents: | mit den folgenden normativen
Dokumenten übereinstimmt: | aux documents normatifs ci-après: | cumple las
documentos normativos: | soddisfa le normative seguenti:

EN 61010-1:2001-02	Safety requirements for electrical equipment for measurement, control and laboratory use - General requirements.
EN 61326-1:2006	Electrical equipment for measurement, control and laboratory use - EMC requirements.

Standards for Canada and USA

CAN/CSA-C22.2 No.1010.1-92	Safety requirements for electrical equipment for measurement, control and laboratory use - General requirements.
UL Std. No. 3101-1	Safety requirements for electrical equipment for measurement, control and laboratory use - General requirements.
FCC, Part 15, Class A	Emission

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Elmar Morscher
CEO

Thomas Neher
Quality Manager

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1 Introduction

These operating instructions contain all information required for installation, operation and maintenance of the PIPETBOY pro. This chapter informs about the symbols used in these operating instructions, the intended use of the PIPETBOY pro and the general safety instructions.

1.1 Symbols used

The operating instructions specifically advise of residual risks with the following symbols:

**WARNING**

This safety symbol warns against hazards that could result in injury or death. It also indicates hazards for machinery, materials and the environment. It is essential that you follow the corresponding precautions.

**CAUTION**

This symbol cautions against potential material damage or the loss of data in a microprocessor controller. Follow the instructions.

**NOTE**

This symbol identifies important notes regarding the correct operation of the device and labour-saving features.

1.2 Intended use

The PIPETBOY pro is a pipetting aid designed for aspirating and dispensing aqueous solutions with plastic or glass pipettes of 1 to 100 ml volumes. It shall not be used for applications other than those specified.

1.3 Safety notes

The PIPETBOY pro corresponds to the state of the art, complies to the recognized safety regulations and is safe to operate. The PIPETBOY pro can be operated only when it is in perfect conditions and while observing these operating instructions.

The device may be associated with residual risks if it is used or operated improperly by untrained personnel. Any person charged with the operation of the PIPETBOY pro must have read and understood these operating instructions, and particularly, the safety notes, or must have been instructed by supervisors so that safe operation of the device is guaranteed.

Regardless of the listed safety notes, additionally applicable regulations and guidelines of trade associations, health authorities, trade supervisory offices, etc. must be observed.

Do not open, convert or alter the PIPETBOY pro in any way. Repairs may only be performed by INTEGRA Biosciences AG or by an authorised after-sales service member.

Parts may be replaced with original INTEGRA parts only.



WARNING

Do not use or charge the PIPETBOY pro in an atmosphere with danger of explosion. Also, do not pipette highly flammable liquids such as acetone or ether.

When handling dangerous substances, comply with the material safety data sheet (MSDS) and with all safety guidelines such as the use of protective clothing and safety goggles. Never point a pipette in anyone's direction.



CAUTION

Avoid pipetting of liquids whose vapours could attack the materials PA (polyamide), POM (polyoxymethylene), FPM (fluor-rubber), NBR (nitrile-rubber), CR (chloroprene), silicone. Corrosive vapours could also damage metallic parts inside the device.

Information on how substances can damage specific materials is given in "chemical resistance charts" that are available on the internet.

Use an original INTEGRA mains adapter only and protect it from moisture, otherwise the PIPETBOY pro might be damaged.



NOTE

Prolonged exposure of the PIPETBOY pro to UV-light can cause discolouration and/or yellowing of the plastic housing. However, this will not affect the performance of the device in any way.

2 Description of the device

2.1 Scope of delivery

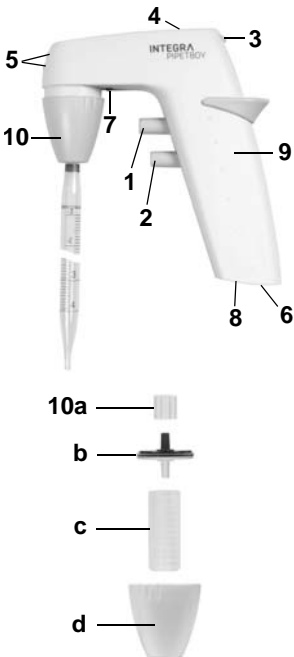
- PIPETBOY pro device
- 2 rechargeable batteries (AAA, NiMH, 1.2 V, 1000 mAh)
- Mains adapter
- Wall holder
- Sterile filter (spare)
- Operating instructions



CAUTION

Verify the scope of delivery when unpacking the device and check for potential transportation damage. Do not operate a device that is damaged, instead contact your local dealer.

2.2 Overview of the PIPETBOY pro



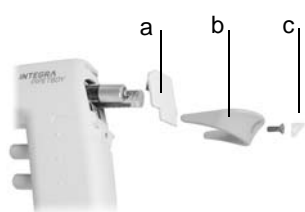
- 1 Aspiration button
- 2 Dispensing button
- 3 Thumb wheel for speed control
- 4 Battery charge indicator (red, green)
- 5 Contacts for charging station
- 6 Socket for mains adapter cable
- 7 LED illumination
- 8 On/off switch for LED illumination function
- 9 Handle
- 10 Nose piece
 - 10a Filter rubber
 - 10b Sterile filter
 - 10c Pipette mount
 - 10d Nose piece housing

3 Installation

3.1 Operating environment

The PIPETBOY pro has been designed for use in a laboratory. It shall be operated in a dry and dust-free location with a temperature of 5-40 °C and a maximal (non-condensing) relative humidity of 80 %.

3.2 Inserting or replacing the batteries



- 1) Open the battery compartment by unscrewing the flexor (b) and removing it together with the cover (a).
- 2) Insert two original INTEGRA rechargeable batteries (1.2 V, 1000 mAh) and make sure that they are inserted with the correct polarity (+/-).
- 3) Put the cover and flexor back in place taking care not to tighten the screw excessively. Cover the screw with the silicone plug (c).

3.3 Charging the batteries

When the battery charge indicator (4) lights up red, the PIPETBOY pro needs charging.

Plug the cable of the mains adapter in the socket (6) at the base of the device's handle (9) and connect the mains adapter to the power supply. The battery charge indicator (4) lights up green when the mains adapter is connected. Charge for 10 hours. When the batteries are fully charged, the current will be interrupted automatically to prevent any damage of the batteries.



NOTE

Before first use, the batteries have to be fully charged for at least 16 hours. Longer charging times do not cause overcharging of the batteries. For a long battery service life it is recommended to charge the battery immediately after the charge indicator lights up red in an environment cooler than 35 °C.

The PIPETBOY pro can be used while it is being charged.



WARNING

The supply voltage must meet the requirements of the mains adapter: 100-240 VAC, 50/60 Hz.

3.4 Mounting of the wall holder

The supplied wall holder serves to park the PIPETBOY pro.

To mount the wall holder, remove the protective foil from the adhesive tape at the back of the holder and press it to the desired place. Make sure that the surface onto which the wall holder is mounted is smooth, clean and grease-free. Wait 24 hours before using the wall holder for the first time. Alternatively the wall mount can be fixed with the included screws.

3.5 Set-up and use of the charging station (optional accessory)

The optionally available charging station (Part No 156 450) serves to simultaneously park and charge the PIPETBOY pro.



To mount the charging station on a wall, use one of the following means:

- double-sided adhesive tape
- screw fixation

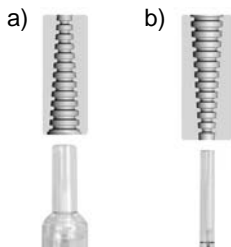
Alternatively, the charging station can be placed on the bench when fitted with rubber feet that prevent its sliding.

Plug the cable of the mains adapter in the socket on the side of the charging station and connect the mains adapter to the power supply.

By parking the PIPETBOY pro in the charging station, the contacts (5) on the device connect to the contacts in the charging station thereby starting the charging. The battery charge indicator (4) lights up green to indicate that the mains adapter is connected.

4 Operation

4.1 Inserting the pipette



The pipette mount (10c) has a special conical channel in order to guarantee a firm and leak-proof grip of the pipette independently of its diameter.

Unscrew the nose piece housing (10d) and:

- orient the pipette mount with the large opening facing down for pipettes > 2 ml (factory setting), or
- orient the pipette mount with the small opening facing down for pipettes < 2 ml.



WARNING

Do not insert pipettes with force into the PIPETBOY pro, because they can break and cause injury, particularly thin pipettes made of glass.

4.2 Pipetting

Press the aspiration button (1) to fill the pipette and the dispensing button (2) to empty it.

The pipetting speed can be controlled in two manners:

- Fine speed adjustment for accurately moving the liquid's meniscus in the pipette is achieved by varying the finger pressure on the aspiration and dispensing buttons.
- Coarse adjustment is achieved by turning the thumb wheel (3) that regulates the pump speed (turning to the left = slower, for small pipettes; turning to the right = faster, for large pipettes).

To empty the pipette by gravity force, press the dispensing button only slightly in order to avoid reaching the trigger point where the pump starts running. Gravity dispensing is used for “to deliver” (TD) pipettes that are not of the “blow-out” type (blow-out pipettes have two thin rings or a frosted band around the neck).

4.3 LED illumination

The LED (7) near the nose piece illuminates the work area around the pipette when the dispensing or aspiration buttons are pressed. After release of the button, the LED remains alight for approx. five seconds before switching off automatically. The on/off-switch (8) at the base of the handle (9) serves to switch the LED function on (I) or off (O). The LED illumination consumes 15% of battery power.

4.4 Troubleshooting

Problem	Probable cause	Remedy
Pipette drips (leak in the system).	Pipette is damaged or not fully inserted in the nose piece (10).	Reinsert a new pipette by pushing it all the way into the nose piece. Make sure that the pipette mount orientation is correct for the used pipette (see <u>"Inserting the pipette" on page 9</u>).
	The inside of the pipette mount (10c) is damaged resulting in insufficient sealing of the pipette neck.	Replace the pipette mount (Part No. 151020).
	The filter rubber (10a) or the filter (10b) in the nose piece are damaged or missing causing a leak.	Replace the filter rubber (Part No. 153225) and/or the filter (Part No. see <u>"Accessories and consumables" on page 13</u>).
Reduced aspiration efficiency or no liquid aspiration.	The filter (10b) is wet or dirty.	Replace filter.
	The nose piece (10) is not tight.	Tighten the nose piece, or replace defective parts.
	The battery is discharged (battery charge indicator lights red).	Charge the battery.
	The battery is missing.	Insert the battery, or connect the instrument to the mains adapter.
	The battery is defective.	Replace the battery.
Reduced operating time with fully charged battery.	The battery is wrongly inserted.	Insert correctly, note polarity (+) and (-).
	The battery is worn.	Replace the battery.
	Wrong battery type is inserted.	Use only original consumables.

5 Maintenance

5.1 Cleaning and servicing

**WARNING**

Always disconnect the PIPETBOY pro from the mains when carrying out maintenance work.

If the PIPETBOY pro gets soiled, it can be cleaned with a cloth moistened with soapy water or with a 70 % ethanol. Never use acetone or other solvents. The nose piece (10), the pipette mount (10c) and the filter rubber (10) can be autoclaved at 121 °C.

It is recommended to change the hydrophobic filter (10b) every three months. Should the filter get wetted or soiled accidentally, it has to be changed immediately. The filter must be oriented with the blue side facing upwards towards the PIPETBOY pro.

After maintenance work, perform a leak test to ascertain correct functioning of the PIPETBOY pro: liquid should not leak out of a filled pipette before the dispensing button is pressed.

Regular servicing of the PIPETBOY pro by a qualified representative of INTEGRA Biosciences AG is recommended.

5.2 Equipment disposal



The PIPETBOY pro is labelled with the “crossed-out wheeled bin” symbol to indicate that this device must not be disposed of with unsorted municipal waste. Instead, it is your responsibility to correctly dispose of your waste equipment by handing it over to an authorised facility for separate collection and recycling. It is also your responsibility to decontaminate the device in case of biological, chemical, and/or radiological contamination so as to protect from health hazards the persons involved in the disposal and recycling of equipment.

For more information about where you can drop off your waste equipment for recycling, please contact your local dealer from whom you originally purchased the product or your local council.

By doing so, you will help conserve natural resources and you will ensure that your waste equipment is recycled in a manner that protects human health and the environment. Thank you!

6 Technical Data

Pipetting speed	max. 10 ml/s
Batteries	Type: rechargeable, AAA, NiMH, 1.2 V, 1000 mAh Charging cycles: 500-1000 (when charging as indicated) Charging time: 10 hours Initial charging should be at least 16 hours. Running time: at least 4000 cycles of aspiration and dispensing of 25 ml.
Mains adapter	Input: 100-240 VAC, 50/60 Hz Output: 9 VDC/500 mA
Materials	Housing: ABS Nose piece: POM Pipette mount: Silicone Filter rubber: Silicone
Dimensions (H x W x D)	145 x 130 x 35 mm
Weight	190 g
Ambient conditions	Operation: 5 – 40°C, max. 80% RH Storage: -10 – 50°C, max. 95% RH

7 Accessories and consumables

Accessories		Part No.
Charging station	for parking and charging the PIPETBOY pro	156 450
Stand for PIPETBOY and VACUBOY	for parking the PIPETBOY pro with inserted pipette and for a well organised work area	155 065
Vacuum tweezers	for picking and placing small objects such as microscopy cover slips	155 890
Nose piece	for holding filter rubber, filter and pipette mount	156 104
Wall holder	for parking the PIPETBOY pro on the wall	156 708
Mains adapter (100-240 VAC, 50/60 Hz)	US version	156 630
	EU version	156 631
	UK version	156 632
	AU version	156 633
	JP version	156 634

Consumables		Part No.
Filter 0.45 µm	sterile	153 015
	unsterile	153 016
Filter 0.2 µm	sterile	156 608
	unsterile	156 607
Pipette mount	for holding pipette in the nose piece, silicone	151 020
Filter rubber	for holding the filter in the nose piece, silicone	153 225
Battery set	2 AAA batteries (NiMH, 1.2 V, 1000 mAh)	156 151

Battery cover set		Colour	Part No.
Set contains:	coloured lid, flexor, screw and cover	white	156 430
		pink	156 431
		green	156 432
		orange	156 433
		blue	156 434

Imprint

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Manufacturer

INTEGRA Biosciences AG
CH-7205 Zizers
Switzerland

www.integra-biosciences.com

info@integra-biosciences.com

Customer service

Please contact your local INTEGRA Biosciences AG representative.

To find out name and address of your local representative go to

www.integra-biosciences.com.

Further information is available from info@integra-biosciences.com.