

INTEGRA



PIPETBOY acu Operating instructions

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INTEGRA



Declaration of conformity | Konformitätserklärung |
Déclaration de conformité | Declaración de conformidad |
Dichiarazione di conformità

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 responsabilità che il prodotto

PIPETBOY acu Models: 155000, 155015, 155 016, 155 017, 155 019

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

2009/129/EC Eco Design Directive

2006/66/EC Battery Directive

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 Safety requirements for electrical equipment for measurement,
control and laboratory use - General requirements.

EN 61326-1 Electrical equipment for measurement, control and laboratory
use - EMC requirements.

Standards for Canada and USA

CAN/CSA-C22.2
No. 61010-1 Safety requirements for electrical equipment for measurement,
control and laboratory use - General requirements.

UL Std. No. 61010-1 Safety requirements for electrical equipment for measurement,
control and laboratory use - General requirements.

FCC, Part 15, Class A Emission

Zizers, June 10th 2011

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Imprint

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1 Introduction

1.1 Intended use

The PIPETBOY acu is a pipetting aid designed for aspirating and dispensing aqueous solutions with plastic or glass pipettes of 1 to 100 ml volumes.

1.2 Safety notes

- 1) Do not use or charge the PIPETBOY acu in an atmosphere with danger of explosion. Also, do not pipette highly flammable liquids such as acetone or ether.
- 2) 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.

- 3) 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.
- 4) Use an original INTEGRA Biosciences mains adapter only and protect it from moisture, otherwise the PIPETBOY acu might be damaged.
- 5) Prolonged exposure of the PIPETBOY acu 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.

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

2 Description of the device

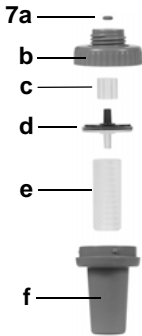
2.1 Scope of delivery

- PIPETBOY acu device
- 1 rechargeable battery (NiMH, 9 V, 180 mAh)
- Mains adapter
- Wall holder
- Sterile filter (spare)
- Operating instructions

2.2 Overview of the PIPETBOY acu



- 1 Aspiration button
- 2 Dispensing button
- 3 Thumb wheel to set maximum speed
- 4 Battery charge indicator
- 5 Socket for mains adapter cable
- 6 Handle
- 7 Nose piece



- 7 Nose piece
- 7a O-ring
- 7b Top half of nose piece housing
- 7c Filter rubber
- 7d Sterile filter
- 7e Pipette mount
- 7f Bottom half of nose piece housing

3 Installation

3.1 Charging the battery

A full charge takes 12 hours, but before the first use, the PIPETBOY acu should be charged at least 16 hours.

When the battery charge indicator (4) flashes red, the PIPETBOY acu needs charging immediately. PIPETBOY acu has an integrated overcharge protection.

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

3.2 Replacing the battery



- 1) Move the lid of the battery compartment upwards and remove it (a).
- 2) Replace the old battery with an original INTEGRA Biosciences rechargeable battery (9 V, 180 mAh) and make sure that it is inserted with the correct polarity (+/-).
- 3) Close the battery compartment with the lid (a).

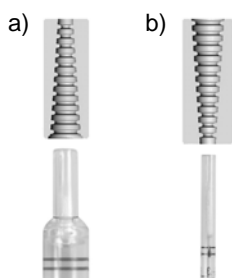
3.3 Mounting of the wall holder

The optional wall holder serves to park the PIPETBOY acu.

To mount the wall holder, remove the protective foil from the adhesive tape at the back of the holder. Hold it with the sign <up> facing upwards 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.

4 Operation

4.1 Inserting the pipette



The silicone pipette mount (7e) has a special conical channel to guarantee a firm and leak-proof grip of the pipette independently of its diameter.

Disassemble the nose piece (see [“5.1 Cleaning and servicing”](#) on page 8) and orient the pipette mount:

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



WARNING

Do not insert pipettes with force into the PIPETBOY acu, 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 aspiration and dispensing speed can be controlled in two manners:

- Fine speed adjustment by varying the finger pressure on the buttons (1, 2).
- Step-less presetting of the maximum pump speed by turning the thumb wheel (3) to optimally match the pipette capacity (turning to the left = slower pump speed, for small pipettes; 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 Troubleshooting

Problem	Probable cause	Remedy
Pipette drips (leak in the system).	Pipette is damaged or not fully inserted in the nose piece (7).	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 "4.1 Inserting the pipette" on page 6).
	The inside of the pipette mount (7e) is damaged resulting in insufficient sealing of the pipette neck.	Replace the pipette mount (Part No. 151020).
	The filter rubber (7c) or the filter (7d) 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 "7 Accessories" on page 10).
Reduced aspiration efficiency or no liquid aspiration.	The filter (7d) is wet or dirty.	Replace filter.
	The nose piece (7) is not tight.	Tighten the nose piece, or replace defective parts.
	The battery is discharged (battery charge indicator flashes 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

The PIPETBOY acu can be cleaned with a cloth moistened with soapy water or with a 70% ethanol. Never use acetone or other solvents.

The nose piece housing (7b, 7f), the pipette mount (7e) and the filter rubber (7c) can be autoclaved at 121 °C.

Disassembly of the nose piece:



Unscrew the nose piece (7) from the handle by turning it counterclockwise. Hold the top half of nose piece housing (7b), press the bottom half (7f) firmly against the top half (7b) and turn it counterclockwise (left). The bottom half of nose piece housing (7f) will disengage after about 1/8th of a turn.

Remove the pipette mount (7e), the filter (7d) and the filter rubber (7c), if required.

It is recommended to change the hydrophobic filter (7d) every three months. Should the filter get wetted or soiled, it has to be changed immediately. The filter must be oriented with the blue side facing upwards towards the PIPETBOY acu.

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

5.2 Equipment disposal



The PIPETBOY acu device must not be disposed of with unsorted municipal waste.

Dispose of the PIPETBOY acu in accordance with the laws and regulations in your area governing disposal of devices.

6 Technical Data

Pipetting speed	max. 10 ml/s
Battery	Type: rechargeable, NiMH, 9 V, 180 mAh Charging cycles: 500–1000 (when charging as indicated) Running time: at least 2000 cycles of aspiration and dispensing of 25 ml.
Mains adapter	Input: 100-240 VAC, 50/60 Hz Output: 17 VDC/180 mA
Materials	Housing: PA Nose piece housing: POM Pipette mount: Silicone Filter rubber: Silicone
Dimensions (H x W x D)	125 x 130 x 35 mm
Weight	220 g
Ambient conditions	Operation: 5–40°C, max. 80% RH Storage: -10–50°C, max. 95% RH

7 Accessories

Accessories		Part No.
Stand for PIPETBOY	for a well organised work area, to park the PIPETBOY acu with inserted pipette	155065
Vacuum tweezers	to pick and place small objects such as microscopy cover slips	155890
Nose piece complete	green, for PIPETBOY acu grey and transparent	155025
	grey, for PIPETBOY acu green, blue, red and purple	155070
Wall mount	for holding the PIPETBOY acu on the wall	155521
Mains adapter (100-240 VAC, 50/60 Hz)	EU version	153210
	US/JP version	153211
	UK version	153214

Consumables		Part No.
Filter 0.45 µm	sterile	153015
	unsterile	153016
Filter 0.2 µm	sterile	156608
	unsterile	156607
Pipette mount	silicone, for holding pipette in the nose piece	151020
Filter rubber	silicone, for holding the filter in the nose piece	153225
Battery	NiMH, 9 V, 180 mAh	153005