

INTEGRA



PIPETBOY GENIUS Operating instructions

130950_V01



Declaration of conformity

INTEGRA Biosciences AG – 7205 Zizers, Switzerland

declares on its own responsibility that the devices

| Description | Models |
|------------------------|---|
| PIPETBOY GENIUS | 1011, 1012, 1013, 1014, 1015, 1016 |
| Accessories | 1200, 1201, 1202, 1203, 1210 |

comply with:

| International | Scope |
|----------------------|--------------------------------------|
| UN 38.3 | Lithium battery testing requirements |

| EU Directives | Scope | Date effective |
|----------------------|--|-----------------------|
| 2014/35/EU | Low voltage directive (LVD) | 20.04.2016 |
| 2014/30/EU | Electromagnetic compatibility (EMC) | 20.04.2016 |
| 2012/19/EC | Waste electrical and electronic equipment (WEEE) | 14.02.2014 |
| 2011/65/EC | Restriction of hazardous substances (RoHS) | 03.01.2013 |
| 2006/66/EC | Battery directive | 26.09.2008 |

| EU Regulations | Scope | Date effective |
|-----------------------|--|-----------------------|
| 1907/2006 | Registration, evaluation, authorisation and restriction of chemicals (REACH) | 01.06.2007 |
| 2019/1782 | External power supply efficiency | 01.04.2020 |

| EU Standards | Scope |
|----------------------------|---|
| EN 9001:2015 | Quality Management |
| EN 61010-1:2020 | Safety general laboratory equipment |
| EN 61326-1:2013 | Electromagnetic compatibility laboratory equipment |
| EN 60950-1:2013 | Safety information technology equipment |
| EN 62368-1:2021 | Safety information technology equipment |
| EN 62133-2:2017 | Batteries containing non-acid electrolytes |
| EN 61000-6-2:2005/ 2019 | Electromagnetic compatibility (EMC) |
| EN 55011:2016/ A11:2020 | Industrial, scientific and medical equipment - radio disturbance |

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| GBR Regulations | Scope | Date effective |
|------------------------|--|-----------------------|
| S.I. 2016/1101 | Electrical equipment safety | 08.12.2016 |
| S.I. 2016/1091 | Electromagnetic compatibility (EMC) | 08.12.2016 |
| S.I. 2008/2164 | Batteries and accumulators regulations | 26.09.2008 |
| S.I. 2013/3113 | Waste electrical and electronic equipment (WEEE) | 01.01.2019 |
| S.I. 2012/3032 | Restriction of hazardous substances (RoHS) | 02.01.2013 |

| GBR Standards | Scope |
|----------------------|--|
| BS 61010-1:2010 | Safety general laboratory equipment |
| BS 62368-1:2020 | Safety information technology equipment |
| BS 63000:2018 | Restriction of hazardous substances (RoHS) |

| USA Regulations | Scope | Date effective |
|--------------------------|---|-----------------------|
| 47 CFR Part 15 (FCC) | Electromagnetic compatibility (EMC) | |
| 17 CFR Parts 240 & 249b | Dodd frank “Conflict minerals” | |
| 27 CCR Parts 25102-27001 | Proposition 65: The safe drinking water and toxic enforcement act | |
| 20 CCR Parts 1601-1608 | CEC BCS, Battery charging efficiency | 01.01.2017 |
| TSCA 40 CFR Part 751 | Toxic substances control act | |

| USA Standards | Scope |
|----------------------|-------------------------------------|
| UL 61010-1:2012 | Safety general laboratory equipment |

| CAN Standards | Scope |
|-----------------------|-------------------------------------|
| CSA-C22.2 No. 61010-1 | Safety general laboratory equipment |

| CHN Regulations | Scope | Date effective |
|------------------------|--|-----------------------|
| Order 32/2016 | Restriction of hazardous substances (RoHS) | 01.07.2016 |

| CHN Standards | Scope |
|----------------------|--|
| GB4943.1-2011 | Information technology equipment safety |
| GB9254-2008 | Information technology equipment radio disturbance |
| GB17625.1-2012 | EMC limits for harmonic current emissions |
| GB31241-2014 | Safety for Lithium-ion batteries |
| SJ/T 11364-2014 | Restriction of hazardous substances (RoHS) |

PIPETBOY GENIUS – Declaration of conformity

| JPN Regulations | Scope | Date effective |
|------------------------|--|-----------------------|
| PSE (Denan) Law | Electrical appliance and material safety law | 01.01.2014 |
| JPN Standards | Scope | Date effective |
| JIS C1010-1:2019 | Safety general laboratory equipment | |
| JIS 61000-6-2 | Electromagnetic compatibility (EMC) | |
| J55011(H27) | Measures against radiation noise | |
| KOR Standards | Scope | Date effective |
| KS C 9610-6-1:2019 | Immunity testing of environments | |
| KS C 9811:2019 | Electromagnetic compatibility (EMC) | |
| AUS Standards | Scope | Date effective |
| AS CISPR 11 AMD 1:2020 | Industrial, scientific and medical equipment - radio disturbance | |
| AS/NZS 61000-6-2:2006 | Electromagnetic compatibility (EMC) | |

Zizers, 2024-09-19


Urs Hartmann
CEO


Daniela Gross
Head of Corporate Quality

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1 Introduction

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. 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 labor-saving features.

1.2 Intended use

PIPETBOY GENIUS is a pipet controller designed for aspirating and dispensing aqueous solutions with plastic or glass pipets of 1 to 100 ml volumes. It is intended for measurement, control and laboratory use. Any use of this instrument in a medical or IVD setting is under the sole responsibility of the user.

1.3 Safety notes

- 1) Do not use or charge PIPETBOY GENIUS in an atmosphere with danger of explosion. Also, do not pipet 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 pipet in anyone's direction.
- 3) Avoid pipetting of liquids whose vapours could attack the materials PP, (polypropylene, housing), POM (polyoxymethylene), PVC (polyvinyl chloride), PBT (polybutylene terephthalate), PET (polyethylene terephthalate, internal plastic parts) or silicone (tubings, seals). Corrosive vapours could also damage metallic and electronic parts inside the device.
- 4) Only use the original LiPo battery (part no. 1210) and protect it from moisture, otherwise PIPETBOY GENIUS might be damaged.
- 5) Old LiPo batteries may cause a safety risk. We recommend to replace the battery after 3 years of use. Also replace the battery if the charging intervals are unusually short or if the charging takes much longer than usual (4 hours or more). These are indicators that the battery has reached the end of its life-cycle.

If a LiPo battery is never deep discharged and is always stored and operated in the recommended temperature range and stored at 40-80% charge level during long standby periods, it may live much longer than 3 years. If it shows no signs of physical damage or change, see [5.5](#), it is a strong indication that you may continue to use the battery.

- 6) LiPo technology bears the risk of thermal runaway and cell rupture if the battery was damaged. Do not expose the battery to heat ($> 60^{\circ}\text{C}$) and avoid mechanical stress. Batteries which were subject to deep discharges may develop internal short circuits, leading to an increased self-discharge rate and heating during battery charging. This may also result in thermal runaway and cell rupture.
- 7) To extend the battery life-cycle, it is recommended to charge the battery every 2 months if the pipet controller is not used regularly. If the pipet controller is not used for more than 6 months, remove the battery from the instrument.

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

Please visit our website www.integra-biosciences.com on a regular basis for up to date information regarding REACH classified chemicals contained in our products.

**NOTE**

The CE and UKCA label is located inside the battery compartment.

2 Description of the device

2.1 Scope of delivery

- PIPETBOY GENIUS device
- Rechargeable LiPo battery, located inside the device
- Wall mount
- Hydrophobic sterile filter 0.45 µm, spare
- Quick Start Guide

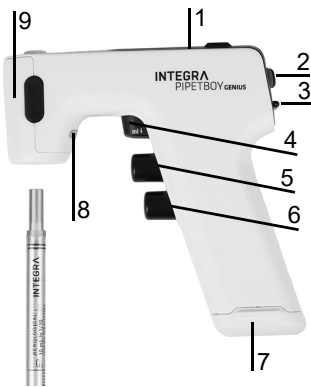
Please note: The mains adapter must be ordered separately



CAUTION

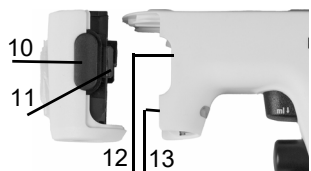
Verify the scope of delivery when unpacking the device and check for potential transportation damage. Do not operate a device that is damaged, instead contact your local INTEGRA representative.

2.2 Overview of PIPETBOY GENIUS



- 1 **Display** with battery indicator
- 2 **Volume wheel**, to set the dispense volume and to navigate in the menu
- 3 **Speed slider**, to set maximum speed
- 4 **Repeat dispense button**, to turn on the device and trigger dispenses
- 5 **Aspirate button**
- 6 **Dispense button**
- 7 **Battery compartment** and **USB-C socket** for mains adapter cable, with snap-fit
- 8 **Pipet indicator**, color shows pipet volume
- 9 **Nose piece (sterile module)**

Nose piece (sterile module)



- 10 **Snap-fit**
- 11 **Pipet mount** (silicone)
- 12 **Filter** (inserted)
- 13 **Sensor protection glass**

3 Installation

3.1 Operating environment

PIPETBOY GENIUS 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 %.



CAUTION

Allow the device to acclimatize before putting it into operation. Risk of condensation.

3.2 Charging the battery

Charge the battery completely before first use until the battery indicator shows a full battery on the display (1). Insert the mains adapter connector into the socket (7) on the underside of the handle. Plug the mains adapter into a wall outlet. A full charge takes 4 hours.

The battery charge status is displayed continuously from full to empty:

- Empty battery blinking: Battery is low and should to be recharged immediately. The PIPETBOY GENIUS can be used for around 2500 pipetting cycles before shutting down.
- Empty battery on the entire screen: no operation possible, the PIPETBOY GENIUS will turn off soon.

PIPETBOY GENIUS has an integrated protection: it will not overcharge even if it is connected to power for indefinite time. To avoid unnecessary power consumption, it is recommended to unplug the mains adapter when the battery indicator is full.



NOTE

PIPETBOY GENIUS can be used while is being charged.

3.3 Mounting of the wall mount



The wall mount serves to park PIPETBOY GENIUS. Make sure that the surface onto which the wall mount is mounted is smooth, clean and grease-free.

To mount the wall mount, remove the protective foil from the adhesive tape at the back of the holder. Make sure the closed part is facing upwards and the open lower part downwards. Wait 24 hours before using the wall mount for the first time.

4 Operation

4.1 Turn on/off the device

Turn on:

Press the repeat dispense button (4) for 3 seconds to turn on the PIPETBOY GENIUS. The last volume is displayed.

Just take the PIPETBOY GENIUS in hand or press the repeat dispense button to wake it up from the stand-by mode.

Turn off:



NOTE

If the PIPETBOY GENIUS has not been moved, it switches to energy-saving standby mode after about 15 seconds and switches off automatically after 7 days at the latest, depending on the battery charge level.

It is not recommended to turn off the device during the daily work routine. To turn off the PIPETBOY GENIUS manually, press the volume wheel (2) in the middle to access the settings menu. Move the cursor down by tapping the volume wheel to the left, highlight “Shutdown” and press the volume wheel in the middle to confirm.

4.2 Inserting the pipet



Insert the pipet into the nose piece until a slight resistance is felt. The steady grip feature enables pipets of any volume to be snapped into a stable and save position.

When an original INTEGRA pipet is inserted, its volume is detected via the color code and the pipet indicator (8) lights up in the same color as the pipet mouth piece.



WARNING

Insert the pipets into the PIPETBOY GENIUS with light pressure. Make sure that the pipets do not break, which can lead to injuries, particularly with thin glass pipets.

4.3 Pipetting

Press the aspirate button (5) to fill the pipet and the dispense button (6) to empty it.

**NOTE**

The PIPETBOY GENIUS is equipped with overflow protection when used with original INTEGRA pipets. The aspiration automatically stops just above the nominal volume and the pipet indicator starts to blink. Additional liquid can be aspirated by pressing the button again.

**NOTE**

The use of a sterile filter is recommended for sterile pipetting. To ensure that the air in the device is also sterile, you can aspirate the sterile air inside the workbench for 30 seconds without having a pipet attached before starting work.

**NOTE**

It may happen that the PIPETBOY GENIUS makes a whistle sound when the aspiration or dispense button is pressed. This does not impact the functionality.

4.3.1 Speed setting

Preset the maximum pipetting speed by moving the speed slider (3) to optimally match your application (down = slow, middle = standard; up = fast).

The aspiration and dispensing speed can be controlled in the following manners:

- Pressing the aspirate (5) or dispense buttons (6) all the way down to pipet with maximum speed.
- Fine speed adjustment by varying the finger pressure on the buttons (5, 6).
- For drop-by-drop dispensing press the dispense button (6) only slightly. This allows speed control until the last drop.

4.3.2 Repeat dispense

The PIPETBOY GENIUS enables to dispense the same volume multiple times from a single aspiration by pressing the repeat dispense button (4).

**NOTE**

The repeat dispense function is only possible with original INTEGRA pipets.

Set the dispense volume from 0.1 to 100 ml by turning and tapping the volume wheel (2) to the left (reduce) or right (increase) until the desired aliquot volume is displayed. Holding the wheel pressed to the side changes the volume quickly.

To fill the pipet, press the aspirate button (5). Each time the repeat dispense button (4) is pressed, the desired aliquot is dispensed with the maximum speed, see also "Pipetting speeds" on page 20. To stop a repeat dispense immediately, press the aspirate or dispense button.



NOTE

Since serological pipets are just calibrated to their maximum volume, it may happen that the graduation lines are not exactly hit during the repeat dispenses. However, the PIPETBOY GENIUS dispenses the volume accurately and reproducibly. Scan here for more details.



4.4 Storage

PIPETBOY GENIUS can be stored stable when it placed on its back (on the speed slider). Ledges on the top and on the side of the device also allow it to be stored upside down or sideways in an elevated position.

In addition, the mounting crown provides a perfect fit in the wall mount with a click.



NOTE

PIPETBOY GENIUS can be stored in the workbench under UV light.

4.5 Settings menu

The settings menu (English only) is not required in the daily work routine. Press the volume wheel (2) in the middle to enter the settings menu with the functions listed below.

Alternatively, tap the volume wheel (2) to navigate below the 0.1 ml minimum or above the 100 ml maximum volume. The Settings menu is located between these volumes. Press the wheel to access the functions.

| Function | Description |
|---------------|--|
| Adjust Liquid | Edit: For liquid density adjustment. (The counter on the top indicates the number of dispenses used during the actual liquid density adjustment.) Default: Resets the density adjustment to the factory value for aqueous liquids. Adj. is on/off: Press to toggle between liquid adjustment on and off. |
| Fillprot. | Overfill protection is non applicable “n/a” when no pipet is attached. It can be switched “on” or “off” once a INTEGRA serological pipet is inserted by tapping the volume wheel (2). |
| Device Info | Displays serial number, firmware version and production date. |
| Shutdown | Turns off the PIPETBOY GENIUS. |
| Exit | Returns to the main menu. |

Move the cursor down by tapping the volume wheel (2) to the left, and up by tapping to the right. Press the middle to enter the sub menu and to confirm the selection.

4.6 Liquid density adjustment

The dispense volume is adjusted by default for aqueous liquids. For non-aqueous liquids, one specified repeat dispensed volume may be gravimetrically determined and adapted for the PIPETBOY GENIUS.



NOTE

Adjustment for non-aqueous liquids is carried out for one specified volume. Therefore, the dispense volume must correspond to the adjusted volume and, for the highest possible accuracy, a pipet with the same volume as for the adjustment should be used.

Materials

- Validated precision balance with 0.01 mg readability
- Lab vessel
- Non-aqueous liquid to be tested

Test conditions and environment

- Room temperature needs to be between 18–25 °C and remain constant (± 0.5 °C) throughout the test.
- Optimal relative humidity of the environment is >50%.
- The balance needs to be situated in a draft-free environment.
- The PIPETBOY GENIUS and the liquid need to be in the laboratory for at least 2 hours prior to testing to reach temperature equilibrium with the environment.

Settings

- 1) Enter the settings menu by pressing the volume wheel (2) in the middle and then on “Adjust Liquid” and “Edit” to proceed with adjustment.
- 2) Press the volume wheel in the middle and enter the targeted repeat dispense volume, e.g. 1 ml.
- 3) Enter the density of the liquid.

Dispensing

- 4) Place a lab vessel on the balance and press tare.
- 5) Insert the pipet and aspirate the liquid.
- 6) Press the repeat dispense button (4). To reduce the measurement error, multiple dispense into the vessel until the pipet is nearly empty. Weigh the liquid dispensed, e.g. 11.35 g.
- 7) The calculated weight of all dispenses is displayed. Overwrite it with the measured weight and press in the middle to confirm. This value is stored for all repeat dispenses with this PIPETBOY GENIUS.
- 8) Repeat steps 4-6 and check whether the volume displayed is identical to the measured.
- 9) Press “Save” to save your settings and “Return” and “Exit” to return to the main menu.



NOTE

An exclamation mark below the volume display indicates the liquid density adjustment. It applies to all pipets of all sizes that are used on this PIPETBOY GENIUS.

Once a liquid density was adjusted, it is possible to inactivate it and use the default settings or re-activate it by pressing “Adj. is on/off” respectively, e.g. if two different liquids are pipetted regularly.

It is possible to overwrite the liquid density adjustment with the factory value by pressing “Default”.

4.7 Troubleshooting

Errors and Warnings are displayed as a 4-digit number. Confirm the error by pressing the volume wheel (2). The device performs a check whether the error is resolved and tries to operate. If the error persists, contact your local service technician and communicate the error number.

| Problem | Error | Probable cause | Remedy |
|--|-------------------------|--|---|
| The device does not turn on | - | Battery empty or battery wrongly inserted. | <ul style="list-style-type: none"> • Connect the device to the power supply • Insert battery with correct polarity (+) and (-). |
| Battery is not charging or battery operation not possible. | E9101 | No battery or wrongly inserted or battery connector dirty. | <ul style="list-style-type: none"> • Insert battery with correct polarity (+) and (-). • Clean the battery. |
| | | Battery defective. | <ul style="list-style-type: none"> • Replace the battery |
| | | Wrong mains adapter used. | <ul style="list-style-type: none"> • Use only original mains adapter (see section 7) |
| Extremely long charging time of battery. | W9010 | Battery worn. | <ul style="list-style-type: none"> • Replace the battery. |
| | | Wrong mains adapter used. | <ul style="list-style-type: none"> • Use only original mains adapter (see section 7) |
| Reduced operating time with fully charged battery. | W9010 | Battery worn. | <ul style="list-style-type: none"> • Replace the battery. |
| INTEGRA pipet wrongly or not detected. | E9002 W9003 E9006 | Nose piece polluted. | <ul style="list-style-type: none"> • Clean nose piece and sensor protection glass inside (13). |
| Generic pipet wrongly detected as INTEGRA pipet. | - | Pipet’s mouth piece interferes pipet detection. | <ul style="list-style-type: none"> • Use INTEGRA pipets. • Do not use this certain pipet type. |

| Problem | Error | Probable cause | Remedy |
|--|--------------|--|--|
| Reduced aspiration efficiency or no liquid aspiration. | E8000 | The filter is wet or dirty. | <ul style="list-style-type: none"> • Replace filter. • Do not seal off the liquid flow and use clean pipets. |
| | E8001 | Pipet orifice blocked. | |
| | E8007- | | <ul style="list-style-type: none"> • Insert the nose piece, or replace defective parts. |
| | E8010 | The nose piece (9) is not completely mounted. | |
| Pipet drips (leak in the system). | - | Pipet is damaged or not fully inserted in the nose piece (9). | <ul style="list-style-type: none"> • Reinsert a new pipet and push it all the way into the nose piece. |
| | | The inside of the pipet mount is damaged resulting in insufficient sealing of the pipet mouth piece. | <ul style="list-style-type: none"> • Replace the pipet mount (#1220) or complete nose piece. |
| | | The filter is damaged or missing causing a leak. | <ul style="list-style-type: none"> • Replace the filter (part no. see “7 Accessories” on page 23). |
| Dispensing not possible. | E8003 | Device operated in lying position. | <ul style="list-style-type: none"> • Dispense in upright position. |
| | E8004 | Device shaken during repeat dispense. | <ul style="list-style-type: none"> • Hold the device steady while dispensing. |
| The device no longer responds. | - | System error. | <ul style="list-style-type: none"> • Turn off the device in the settings menu and turn on afterwards. • Alternatively, remove the battery for 2 seconds. |
| Environmental conditions not met. | E8005 | Humidity too low. | <ul style="list-style-type: none"> • Run the device in the environment specified (see 6.1). |
| | E8006 | Humidity too high. | |
| | E8013 | Temperature too low. | |
| | E8014 | Temperature too high. | |
| Further error messages. | any other | Hardware error, sensor failure, software error. | <ul style="list-style-type: none"> • If error persists, note error number and contact service. |

5 Maintenance



WARNING

Always turn off the PIPETBOY GENIUS when carrying out maintenance work, especially before disassembling.

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

5.1 Disassemble the nose piece



To disassemble the nose piece (9) press the black snap-fit (10) on both sides and remove the outer part of the nose piece from the side.

To reassemble, push the part of the nose piece back into the upper rails until it clicks into place.

5.2 Change the filter

Remove the nose piece to access the filter. Pull firmly on the filter to remove it.

It is recommended to change the hydrophobic filter every three months. Should the filter get wetted or soiled, it has to be changed immediately. If one side of the filter is colored, it must face towards PIPETBOY GENIUS. Clear (transparent) filters can be inserted in any direction. Press the filter deep into the tubing opening.

5.3 Cleaning and servicing

PIPETBOY GENIUS can be cleaned with a cloth moistened with soapy water or with a 70% ethanol. Ensure that the sensor protection glass (12) inside the nose piece is always clean.

5.4 Decontamination

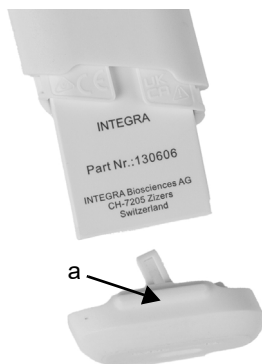
Disassemble the nose piece, see 5.1 and remove the pipet mount. The nose piece housing and the pipet mount can be autoclaved at 121 °C, 1 bar overpressure for 20 minutes. Silicone may become brittle after extensive autoclaving. Replace the pipet mount if it is damaged.

If the housing of the PIPETBOY GENIUS have been in contact with biohazardous material, it must be decontaminated in accordance to good laboratory practice. Do not spray directly on the instrument but use a lint-free cloth, lightly soaked with a disinfectant

and wipe dry directly after decontamination. Never use acetone or other solvents! Follow the instructions provided by the disinfectant manufacturer.

The device may be decontaminated with H₂O₂ gas (maximal concentration 35 %) for 60 minutes.

5.5 Replacing the battery



- 1) Press the snap-fit on both sides of the battery compartment (7, a) and pull the lid straight out of the handle to avoid damaging the latches. Let the old battery fall out.
- 2) Insert the new rechargeable battery (part no. 1210) with the correct polarity (+/-): the INTEGRA logo is visible and the arrows point towards the device (the 5 golden contacts on the battery point towards the contacts in the device).
- 3) Close the battery compartment with the lid.
- 4) To wake up the new battery from the shipment mode, connect the PIPETBOY GENIUS to power supply.

Annual inspection: If you operate the battery beyond the recommended 3 year period, visually check the battery for signs of damage, e.g. discoloration, unexpected stains, shrinking of the tube wrapping. When the battery capacity is reduced due to age, the warning W9010 is displayed.

5.6 Equipment disposal



PIPETBOY GENIUS device must not be disposed of with unsorted municipal waste. Do not dispose of the device in a fire.



PIPETBOY GENIUS contains a LiPo battery. Do not modify the battery in any way. Dispose of the PIPETBOY GENIUS device and the battery separately in accordance with the laws and regulations in your area governing disposal of devices containing LiPo batteries.

In certain regions and countries, e.g. in EU member states, the distributor is obliged to take back this product free of charge at the end of life. Please contact your local distributor for more details.

6 Technical Data

6.1 Specifications

| | |
|------------------------|--|
| Volume settings | Repeat dispense volume range: 0.1-100 ml <10 ml: 0.05 ml graduation ≥10 ml: 0.1 ml graduation |
| Battery | Type: rechargeable, Lithium polymer, 1300 mAh Typical charging time: 3.5 hours Charging cycles: 500–1000 (when charging as indicated) Running time: at least 2500 cycles of aspiration and dispensing of 25 ml. |
| Electricity supply | Mains adapter input: 100–240 VAC, 50/60 Hz Device Input: 5 VDC, 1 A |
| Materials | Housing, nose piece: PP Cover lens with display: PA Volume wheel, speed slider, buttons: POM Pipet indicator: PC Pipet mount: Silicone |
| Dimensions (H x W x D) | 141 x 143.5 x 35.3 mm |
| Weight | 193 g |
| Ambient conditions | Operation: 5–40 °C, max. 80% RH Storage: -10–50 °C, max. 95% RH |

The regulatory marks are in the housing below the cover of the battery compartment.

6.2 Intellectual property

For patent and trademark information visit:

<https://www.integra-biosciences.com/patents-trademarks>.

6.3 Pipetting speeds

The maximum pipetting speeds are reached when the button is fully pressed with the **slider** (3) in the following positions (down = slow, middle = standard, up = fast).

6.3.1 Manual control

| Pipet volume | Maximum pipetting speed | | |
|----------------|-------------------------|---------|----------|
| | slow | medium | fast |
| INTEGRA 1 ml | 0.5 ml/s | 1 ml/s | 2 ml/s |
| INTEGRA 2 ml | 1 ml/s | 2 ml/s | 4 ml/s |
| INTEGRA 5 ml | 2 ml/s | 5 ml/s | 10 ml/s |
| INTEGRA 10 ml | 2 ml/s | 5 ml/s | ≤12 ml/s |
| INTEGRA 25 ml | 2 ml/s | 10 ml/s | ≤12 ml/s |
| INTEGRA 50 ml | 2 ml/s | 10 ml/s | ≤12 ml/s |
| INTEGRA 100 ml | 2 ml/s | 10 ml/s | ≤12 ml/s |
| Non-INTEGRA | 2 ml/s | 10 ml/s | ≤12 ml/s |

6.3.2 Repeat Dispense

| Aliquot volume | Maximum aliquot speeds | | |
|----------------|------------------------|----------|----------|
| | low | medium | high |
| 0.05 ml | 0.1 ml/s | 0.2 ml/s | 0.2 ml/s |
| 0.1 ml | 0.1 ml/s | 0.2 ml/s | 0.2 ml/s |
| 0.2 ml | 0.1 ml/s | 0.2 ml/s | 0.4 ml/s |
| 0.3 ml | 0.1 ml/s | 0.3 ml/s | 0.6 ml/s |
| 0.4 ml | 0.1 ml/s | 0.4 ml/s | 0.8 ml/s |
| 0.5 ml | 0.2 ml/s | 0.5 ml/s | 1.0 ml/s |
| 0.6 ml | 0.2 ml/s | 0.6 ml/s | 1.2 ml/s |
| 0.7 ml | 0.2 ml/s | 0.7 ml/s | 1.4 ml/s |
| 0.8 ml | 0.3 ml/s | 0.8 ml/s | 1.6 ml/s |
| 0.9 ml | 0.3 ml/s | 0.9 ml/s | 1.8 ml/s |
| 1.0 ml | 0.3 ml/s | 1.0 ml/s | 2.0 ml/s |
| 2.0 ml | 0.7 ml/s | 2.0 ml/s | 4.0 ml/s |
| 3.0 ml | 1.0 ml/s | 3.0 ml/s | 6.0 ml/s |
| 4.0 ml | 1.0 ml/s | 4.0 ml/s | 7.0 ml/s |
| 5.0 ml | 1.0 ml/s | 5.0 ml/s | 7.0 ml/s |
| 6.0 ml | 1.0 ml/s | 5.0 ml/s | 7.0 ml/s |
| 7.0 ml | 1.0 ml/s | 5.0 ml/s | 7.0 ml/s |
| 8.0 ml | 1.0 ml/s | 5.0 ml/s | 7.0 ml/s |
| 9.0 ml | 1.0 ml/s | 5.0 ml/s | 7.0 ml/s |

6.4 Chemical compatibility

The table below lists PIPETBOY GENIUS parts that come into contact with the aspirated liquid or its aerosols and vapors, and rates the compatibility of these parts to a few of the chemicals commonly used in laboratories. To determine the compatibility of a component to a chemical not listed in the table, please consult one of the several tables available on the internet. Note that the rating refers to soaking in the concentrated chemical; however, more relevant here is the attenuated effect resulting from vapors and the diluted chemical. It is recommended to test the compatibility of relevant components to a specific chemical prior to extensive use.

INTEGRA Biosciences does not warrant that the information in the table is accurate or complete and that any material is suitable for any purpose.

Chemical compatibility chart

| Parts | Materials | Acetic acid | Acetone | Chloroform | Ethanol | Hydrochloric acid (20%) | Isopropyl alcohol | Sodium acetate (3M, pH 5.2) | Sodium chloride saturated | Sodium hypochlorite (JAVEL) | Sodium hydroxide (50%) |
|--|------------------------------|-------------|---------|------------|---------|-------------------------|-------------------|-----------------------------|---------------------------|-----------------------------|------------------------|
| Handle, nose piece housing | PP | A | A | C | A | A | A | A | A | A | A |
| Cover lens | PA | C | A | C | B | C | A | A | A | A | A |
| Volume wheel, speed slider, buttons, pipet gripper | POM | C | A | A | A | B | A | A | A | C | A |
| Pipet indicator | PC | B | C | C | B | A | A | A | A | A | C |
| Pipet mount, tubings | Silicone | B | C | C | A | A | A | C | A | A | A |
| Internal parts (e. g. pump, electronics) | Elec-tronic board components | C | C | C | C | C | A | A | A | C | C |
| | Metal | C | A | A | A | C | A | A | B | C | C |

Compatibility ratings:

A = Good: no or minor effects.

B = Fair: moderate effects, not recommended for continuous use.

C = Critical: not recommended, suitability to be determined by test.

7 Accessories

| Accessories | | Part No. |
|---|--|-----------------|
| Mains adapter (100-240 VAC, 50/60 Hz) | US/JP version: type A plug, 2-pole | 1200 |
| | EU/KR version: type C plug, 2-pole | 1201 |
| | UK version: type G “Commonwealth” plug, 3-pole | 1202 |
| | AU/CN version: type I, 3-pole | 1203 |
| Battery | LiPo | 1210 |
| Pipet mount | silicone, for holding pipet in the nose piece | 1220 |
| Wall mount | for PIPETBOY GENIUS | 1230 |
| Sterile module (nose piece) | white whiz | 1241 |
| | lemon luminary | 1242 |
| | mint mastermind | 1243 |
| | berry brainy | 1244 |
| | blue brilliance | 1245 |
| | steel smart | 1246 |
| Battery cover | white whiz | 1261 |
| | lemon luminary | 1262 |
| | mint mastermind | 1263 |
| | berry brainy | 1264 |
| | blue brilliance | 1265 |
| | steel smart | 1266 |

| Filters | | Part No. |
|----------------|--|-----------------|
| Filter 0.45 µm | sterile/unsterile, for the country specific part numbers, please refer to our website | _____ |
| Filter 0.2 µm | sterile/unsterile, for the country specific part numbers, please refer to our website | _____ |

| Devices | | Part No. |
|--------------------|-----------------|-----------------|
| PIPETBOY GENIUS | white whiz | 1011 |
| | lemon luminary | 1012 |
| | mint mastermind | 1013 |
| | berry brainy | 1014 |
| | blue brilliance | 1015 |
| | steel smart | 1016 |

| Serological Pipets | | Part No. |
|---------------------------|--|-----------------|
| 1 ml | Polystyrene, sterile, pack of 1000, individually wrapped | 1401 |
| 2 ml | Polystyrene, sterile, pack of 1000, individually wrapped | 1402 |
| 5 ml | Polystyrene, sterile, pack of 200, individually wrapped | 1403 |
| 10 ml | Polystyrene, sterile, pack of 200, individually wrapped | 1404 |
| 25 ml | Polystyrene, sterile, pack of 200, individually wrapped | 1405 |
| 50 ml | Polystyrene, sterile, pack of 100, individually wrapped | 1406 |
| 100 ml | Polystyrene, sterile, pack of 100, individually wrapped | 1407 |
| 1 ml | Polystyrene, sterile, pack of 1000, 25 per bag | 1501 |
| 2 ml | Polystyrene, sterile, pack of 1000, 25 per bag | 1502 |
| 5 ml | Polystyrene, sterile, pack of 500, 25 per bag | 1503 |
| 10 ml | Polystyrene, sterile, pack of 500, 25 per bag | 1504 |
| 25 ml | Polystyrene, sterile, pack of 200, 25 per bag | 1505 |
| 50 ml | Polystyrene, sterile, pack of 100, 25 per bag | 1506 |
| 100 ml | Polystyrene, sterile, pack of 100, 10 per bag | 1507 |

Imprint

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This operating instruction manual has part number 130950, the version is V01. It applies as of firmware version M 1.13 or higher (see Settings - Device Info) of PIPETBOY GENIUS until a newer revision is released.

Manufacturer and customer service

Your local INTEGRA Biosciences representative, further information, and operating instructions in other languages can be found at www.integra-biosciences.com or are available on request info@integra-biosciences.com.

Manufacturer

INTEGRA Biosciences AG

Tardisstrasse 201
CH-7205 Zizers, **Switzerland**
T +41 81 286 95 30
info-ch@integra-biosciences.com

INTEGRA Biosciences Corp.

22 Friars Drive
Hudson, NH 03051, **USA**
T +1 603 578 5800
info-us@integra-biosciences.com

Direct sales country

Integra Biosciences PTY Ltd

Unit 55, 193-203 South Pine Road
Brendale QLD 4500, **Australia**
T +617 3497 5800
info-au@integra-biosciences.com

INTEGRA Biosciences (Shanghai) Co., Ltd.

Room 1110, No. 515 Huanke Road
Shanghai 201315, **China**
T +86 21 5844 7203
info-cn@integra-biosciences.com

INTEGRA Biosciences Nordic ApS

Vallensbækvej 22A 3TV
Brøndby 2605, **Denmark**
T +45 3173 5373
info-nordic@integra-biosciences.com

INTEGRA Biosciences SAS

8 avenue du Fief
95310 Saint Ouen l'Aumône, **France**
T +33 1 34 30 76 76
info-fr@integra-biosciences.com

INTEGRA Biosciences Deutschland GmbH

An der Amtmannsmühle 1
35444 Biebertal, **Germany**
T +49 6409 81 999 15
info-de@integra-biosciences.com

INTEGRA Biosciences KK

Higashikanda 1-5-6, Chiyoda-ku
Tokyo, 101-0031, **Japan**
T +813 5962 4936
info-jp@integra-biosciences.com

INTEGRA Biosciences Benelux BV

Smederijstraat 2
4814 DB Breda, **Netherlands**
T +31 630 609 866
info-benelux@integra-biosciences.com

INTEGRA Biosciences Ltd

2 Rivermead Business Park
Thatcham, Berks, RG19 4EP, **United Kingdom**
T +44 1635 797 00
info-uk@integra-biosciences.com
