

The background features a series of blue, semi-transparent spheres of various sizes, connected by thin, light blue lines that create a network-like pattern. The spheres have a glossy, reflective surface, and the lines are slightly blurred, giving a sense of depth and movement. The overall aesthetic is clean and scientific.

**LEXOGEN**

The RNA Experts

# LUTHOR

single cell dispenser

LUTHOR single cell dispenser

## Packing Guide

Catalog Numbers:  
231.01 (LUTHOR single cell dispenser)  
231.04 (LUTHOR single cell dispensing Kit)

231UI795V0100

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Under no circumstances shall the liability of this warranty exceed the purchase price of this product.

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### **LITERATURE CITATION**

For any publication using this product, please refer to it as Lexogen's LUTHOR™ single cell dispenser.

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# 1. Overview

The LUTHOR single cell dispenser is a fast, gentle, and traceable solution for single cell dispensing.

This Packaging Guide offers detailed instructions on unpacking, cleaning, decontamination and re-packing of the instrument. For system and technology overview, guidelines on operating the instrument, data analysis and troubleshooting, please refer to the LUTHOR single cell dispenser User Guide (231UG794V0100).

**IMPORTANT:** Before handling the LUTHOR single cell dispenser for the first time, carefully read the Safety Information on page 7, as well as all other information in this manual and the LUTHOR single cell dispenser User Guide (231UG794V0100). Additionally, contact a Lexogen representative for online training.

Failure to read and follow these guidelines could lead to improper or incorrect installation, maintenance, shipping, usage and damage to the instrument. Pay special attention to all warnings displayed on the instrument.

Improper use could also cause severe personal injury, death, unpredictable results, instrument malfunction, and premature wear to components shortening the lifetime of the instrument. Such actions may void your warranty.

Keep the user manuals and any other safety and operating instructions provided with the instrument in a safe place, accessible to all users for future reference.

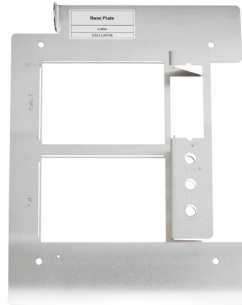
## 2. Components and Storage Conditions

Please find below the list of all the parts that come with the LUTHOR single cell dispenser. You may use this section of the Packaging Guide as a checklist upon unpacking, re-packing and and/or returning the machine, ensuring that nothing gets forgotten or lost.

- 
- LUTHOR single cell dispenser



- 
- Base Plate



- 
- Mini PC Intel NUC 10i5FNKN



- 
- Power Supply for the LUTHOR single cell dispenser



- 
- PCR Plate Holder (2x)



- 
- Power Supply for the mini PC (NUC)



- 
- Supporting cables (CAB1, CAB2 with USB B and CAB2 for NUC Power Supply (2 cables))



- 
- Troubleshooting Toolkit



- 
- 4-port USB C Mini Hub



- 
- TSA Lock



- 
- Barcode Reader













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The instrument and all its parts listed here should be kept at room temperature.

# 3. Safety Information

## 3.1 Symbols on the Instrument

Each safety label on the instrument contains an alert symbol that indicates a type of potential safety hazard.

Symbol	Indication
	Consult the product documentation. Read and understand the operator's manual before using this equipment.
	Potential electrical-shock hazard from a high-voltage source. All safety instructions must be read and understood before proceeding with the installation, maintenance, and servicing of all modules.
	Risk of electrical shock, do not open.
	Indoor use only.
	WEEE compliant.
	Location of a fuse.
	DC current.
	The instrument or disposable manufacture date.
	Compliance with Chinese RoHS Pollution Control Requirements.
	CE marking.

## 3.2 Warnings and Precautions

The instrument is designed for safe use when installed correctly and operated by trained personnel following general safety practices and the instructions in this user manual. Any use of the instrument other than that described in this manual may result in danger to the user. The guidelines in this section explain the potential risk associated with using this instrument and provide important supplemental safety information to minimize the risks. Follow the instructions carefully to protect yourself, others, and the equipment from potential hazards and create a safe work environment. Use this instrument only as specified to avoid damage to equipment and injury to personnel. Always follow local working area safety instructions and laboratory policies, standards for health, safety, and prevention of accidents. Contact the local authorities governing electrical power supply, building constructions, maintenance, or safety for more information about the safe installation and operation of the instrument.

Do not use the instrument if:

- It has been opened or disassembled.
- It has been dropped or damaged.
- It has damaged or broken parts.
- It has a damaged power cable.
- An object has entered into the instrument.

### 3.2.1 Moving Parts Safety

**WARNING:** During instrument operations there is a pinch hazard between the extremity of the LUTHOR scd Tip and the instrument work surface. Do not place your hands on the instrument during the dispensing process or at any time the instrument is moving.

### 3.2.2 Electrical Shock and Fire Hazard

**WARNING:** Electrical Shock Hazard. Do not remove the covers. Removing the covers might cause injury or malfunctioning of the system. The covers need not be removed for routine maintenance or operation of the system. Only authorized personnel are allowed to remove any cover of the instrument. Never push a foreign object through an opening into the instrument. Ensure that the correct protective earth (grounding) is connected to the main power outlet. The instrument is equipped with a three-wire electrical plug, do not try to insert the plug into a non-grounded power outlet.

Do not use any other cables than those provided with LUTHOR single cell dispenser.



In case of failure and for emergency stop, the mains power supply plug shall be unplugged. Keep the power plug accessible at all times. This instrument is protected by a fuse with the following characteristics: 250 V, 10 A, Type format 5 x 20.

**WARNING:** Fire Hazard. Do not use the instrument in areas classified as hazardous locations, for example, in oxygen-laden environments. If flames or smoke appear, immediately switch off the power supply, unplug the instrument from the electrical outlet, and contact [support@lexogen.com](mailto:support@lexogen.com).

**WARNING:** Electrical Shock and Fire Hazard. Do not allow liquids to enter the interior of the instrument. Protect the instrument against accidental spillages and splashes. Clean up spillages immediately. Do not operate the instrument if liquids have entered the instrument. Do not use the instrument in a wet and damp location. Avoid areas with high humidity or condensation. Before cleaning, unplug the instrument.

### 3.2.3 Biological Safety

This instrument is primarily designed for use with nonpathogenic samples in biosafety level 1 environments (BSL-1) or lower.

**WARNING:** Samples containing infectious agents. If you use infectious agents with this instrument, handle such samples with the greatest care following the required safety regulations. The responsible body (e.g., laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe and that the instrument operators are suitably trained and not exposed to hazardous levels of infectious agents as defined in the applicable Materials Safety Data Sheets (MSDS) or other regulatory documents. Disposal of wastes must be in accordance with all national, state, and local health and safety regulations and laws.

Contamination infection may lead to severe personal injury depending on the biological material used. All clinical samples must be considered potentially infectious. If bio-hazardous material is or has been used, the operator must choose and wear personal safety equipment as indicated in the warnings and precautions for the particular substance. The above safety precaution also accounts for any hazardous chemical, including toxic or corrosive chemicals, acidic or radioactive substances that may be present in the sample.

**WARNING:** Waste disposal. Waste containers may contain hazardous chemicals or infectious agents from the process. Such wastes must be collected and disposed of properly in accordance with the local safety regulations. Refer to your local safety regulations for proper disposal procedures.

## 3.2.4 Chemical Safety

**WARNING:** Hazardous chemicals. If you use hazardous chemicals or chemicals which become hazardous after completing the protocol run, follow the required safety regulations. Always wear safety glasses, gloves, and a lab coat. The responsible body (e.g., laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe and that the instrument operators are not exposed to hazardous levels of toxic substances (chemical or biological) as defined in the applicable Materials Safety Data Sheets (MSDS) or other regulatory documents. Disposal of wastes must be in accordance with all national, state, and local health and safety regulations and laws.

If hazardous material has been used or spilled, care must be taken to decontaminate the instrument thoroughly. It is strictly prohibited to continue to handle contaminated accessories or parts of the instrument. All liquid and solid waste must be considered hazardous and must therefore be handled taking universal laboratory precautions. Waste disposal must be in accordance with any local regulations.

## 3.2.5 Servicing and Transportation

Improper or incorrect servicing or repair of the instrument can cause hazards to users, lead to unpredictable results, cause instrument malfunctions or damage, as well as premature wear and tear and reduced life of the instrument. It may also void your warranty. Do not service the instrument yourself. Servicing and repair must be performed by qualified service personnel.

Using unauthorized parts can cause malfunctions of the instrument and impair results. Lexogen does not honor any warranty or accept any responsibility for instrument failure or damages resulting from the use of inappropriate parts.

The instrument should be transported with care in packaging specified by Lexogen. Internal damage can occur if the instrument is subjected to excessive vibration or is dropped. If you have questions regarding proper decontamination or shipment, contact [support@lexogen.com](mailto:support@lexogen.com).

## 4. User-Supplied Consumables and Installation Requirements

Please read the information on the Safety on page 7 and ensure that your working area is adequately prepared before you install the LUTHOR single cell dispenser.

**WARNING:** If there is any damage, do not use the instrument and contact [support@lexogen.com](mailto:support@lexogen.com).

The instrument is intended for indoor use only and in the following environmental conditions:

- Altitude up to 2,000 m (6,562 ft)
- Temperature +5 °C to 40 °C (41 °F and 104 °F)
- Maximum relative humidity 80 % for temperatures up to 31 °C (87.8 °F) decreasing linearly to 50 % relative humidity at 40 °C (104 °F)
- Pollution degree 2
- Electromagnetic environment of domestic class (max 3 V/m, according to IEC61000-4-3)

The input voltage external power supply specifications are as follows:

- 100 - 240 V~, 50/60 Hz
- Accepts 10 % voltage fluctuation
- Transient overvoltages cat. 2
- Temporary overvoltage.

LUTHOR single cell dispenser is to be used only with the provided power supply model MEAN WELL GSM160A12-R7B and provided main supply cord in order to guarantee safe operation.

Take special care while handling liquids.

Consumables for the operation of the LUTHOR single cell dispenser include the LUTHOR single cell dispensing Kit (Cat. No. 231.04) and PCR plates. The LUTHOR single cell dispensing Kit and PCR plates are not required for the installation procedures of the instrument. For more information on the LUTHOR single cell dispensing Kit, please refer to the LUTHOR single cell dispenser User Guide (231UG794V0100).

**ATTENTION:** The following components are required but are not provided by Lexogen:

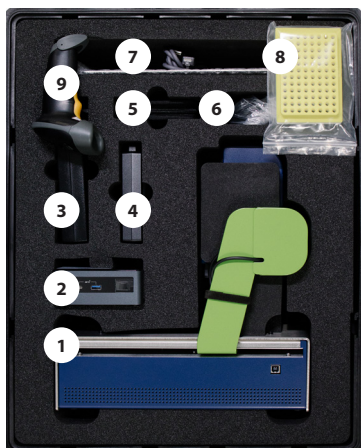
- Computer screen, including display cable (HDMI type A)
- Computer keyboard
- Computer mouse

Installation, repair, or replacement of the above components is the client's responsibility.

# 5. Unpacking and Installation of the LUTHOR single cell dispenser

**IMPORTANT:** Before opening the transport box, check for any visible external damage to the box. Do not use the instrument if you notice any damage!

- 1 Open the transport box.



- 1 LUTHOR dispenser (instrument)
- 2 Mini-computer (NUC)
- 3 Power Supply for the LUTHOR dispenser
- 4 Power Supply for the mini PC (NUC)
- 5 Troubleshooting Toolkit
- 6 4-port USB-C Mini Hub
- 7 Base Plate, cables CAB1 and 2x CAB2
- 8 2x PCR-Plate Holder (stored in position 7)
- 9 Barcode Scanner (stored in position 7)

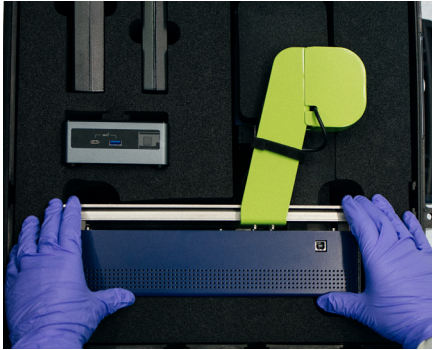
Remove the LUTHOR single cell dispenser from the transport box - with two hands gently remove the instrument out of the box while holding it by its base.

- 2 **ATTENTION:** Do not hold the LUTHOR single cell dispenser by the top part of the instrument (i.e., the pipetting head).

**ATTENTION:** Place the instrument on a stable support. Otherwise, the instrument might fall down, potentially causing serious bodily harm and/or severe damage to the instrument.

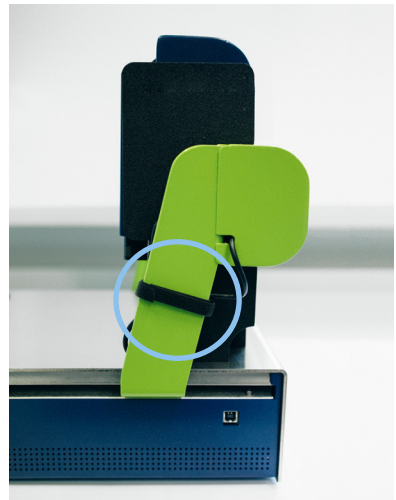
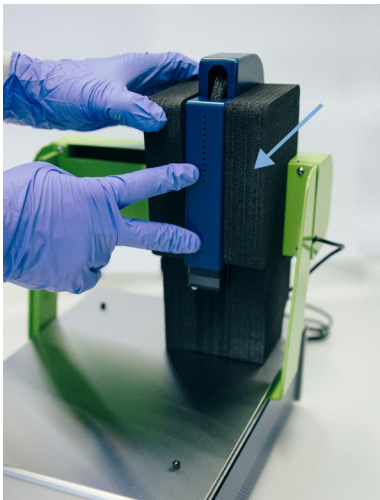
The LUTHOR single cell dispenser can be used on a bench or in a biosafety cabinet. Enough space next to the instrument is required to fit the mini PC (NUC). If placed in a biosafety cabinet, a trolley or a table can be used for the placement of the mini PC (NUC).

**NOTE:** Three electrical outlets are needed for the LUTHOR single cell dispenser, the mini PC (NUC), and the screen.



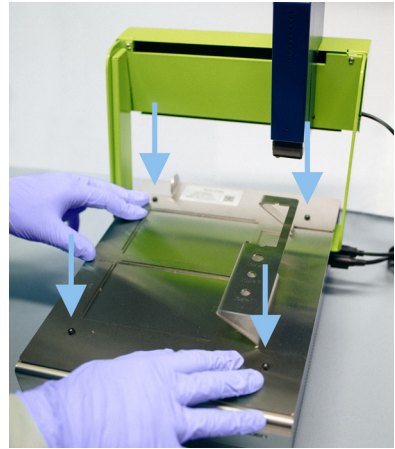
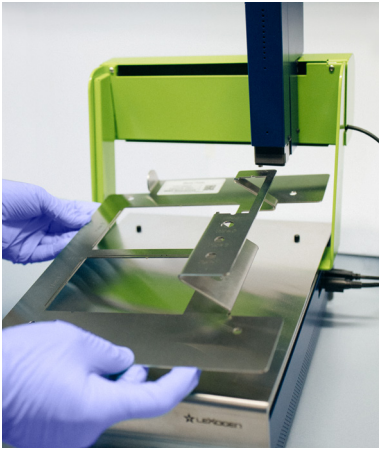
Remove the black protective foam around the pipetting head. Then remove the strap that holds the USB cable on the right side of the LUTHOR single cell dispenser.

3



Assemble the Base Plate.

4



5

Place the mini PC (NUC) close to the instrument so that you can connect the USB cables afterward.

6

Gather a screen (including a HDMI cable for the screen), keyboard, and mouse next to the mini PC (NUC).

Connect the Power Supply for the LUTHOR single cell dispenser to the instrument.

**ATTENTION:** Make sure that the flat side of the cord is facing upwards.

The Power Supply is to be connected to an inlet at the back of the instrument.

7



8

Plug the power cord CAB1 into the Power Supply of the LUTHOR single cell dispenser. Insert the other end of the power cord into a properly grounded wall outlet or UPS.

---

Insert the CAB2 (USB B) into the right side of the LUTHOR single cell dispenser.

**ATTENTION:** Make sure the the flat side of the connector is facing up.

Insert the other end of the USB B cable into the USB B port on the rear of the mini PC (NUC).

9



10

Insert the CAB2 (mini PC (NUC) power cord) into the power inlet on the rear of the mini PC (NUC), and then insert the other end of the power cord into a properly grounded wall outlet or UPS.

11

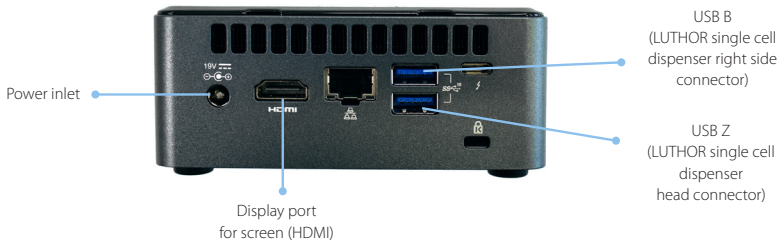
Plug the computer screen into a properly grounded wall outlet or UPS.

12

Connect the computer screen to the the HDMI display port on the rear of the mini PC (NUC) with an appropriate HDMI cable.

Connect the LUTHOR single cell dispenser head to the USB Z port on the rear of the mini PC (NUC) with the USB Z cable.

13



14

Connect the provided 4-port USB C Mini Hub to the USB port located on the front panel of the mini PC (NUC). Then connect the computer mouse and keyboard to the 4-port USB C Mini Hub.

15

Connect the Barcode Scanner to the USB A port of the mini PC (NUC).

---

## 6. Cleaning and Decontamination of the LUTHOR single cell dispenser and Placement Under Biosafety Cabinet

Please ensure that the instrument is fully cleaned and decontaminated before packing any of its components.

Isopropanol and ethanol (between 70 % to 100 %) are recommended to clean and disinfect the LUTHOR single cell dispenser. Observe the applicable Safety Data Sheets (SDS) when manipulating those substances and wear personal safety equipment accordingly. Disposal of wastes must also be in accordance with all national, state, and local health and safety regulations and laws. To disinfect and place the instrument under biosafety cabinet, please follow the protocol below. Use the appropriate disinfectant for the potential pathogen and to decontaminate surfaces in contact with biohazardous samples.

**ATTENTION:** Do not use liquid or aerosol cleaning agents, always use a damp cloth!

---

1 Remove the base plate of the instrument.

---

2 Wipe down the external surfaces of the instrument, the Base Plate, and cables using a lint free cloth damp with an appropriate solution (e.g., 70 % ethanol or 70 % isopropanol).

---

3 Place the LUTHOR single cell dispenser on a trolley in front of the biosafety cabinet.

---

4 Repeat the previous wiping on all the external surfaces of the LUTHOR single cell dispenser, base plate, and cables.

---

5 Place the instrument under the biosafety cabinet, ideally on the right side. Placement on the left might require a USB type A extension. Do not cover the front grid of the biosafety cabinet with the LUTHOR single cell dispenser and leave a minimum distance of 15 cm / 5.9 inches from the front window. Leave a minimum distance of 10 cm / 3.9 inches from the back and lateral walls of the biosafety cabinet.

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6 Ideally, the cables connected to the LUTHOR single cell dispenser should go through a dedicated opening on the biosafety cabinet wall. Alternatively, they can exit the biosafety cabinet through the front window.

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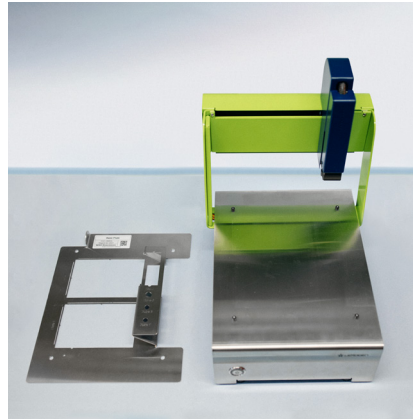
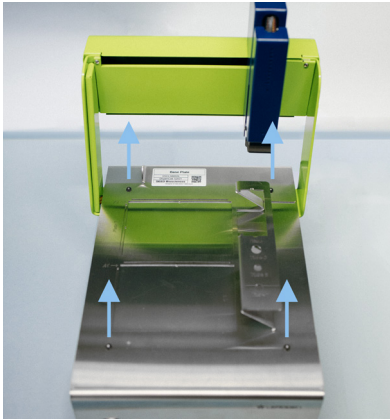


## 7. Packing of the LUTHOR single cell dispenser

- 1 Disconnect cables plugged into the LUTHOR single cell dispenser's right panel ports (i.e., the power supply cord for the LUTHOR single cell dispenser and the CAB2).
- 

Remove the Base Plate of the instrument.

2



- 3 Disconnect the cables plugged into the mini PC (NUC) (i.e., CAB2, USB Z, HDMI, bar-code scanner cable).
- 

- 4 Pack cables and the Base Plate in the transport box.
- 

- 5 Secure the USB cable of the pipetting head on the right side of the LUTHOR single cell dispenser with the strap.
- 

- 6 Place the black protective foam around the pipetting head. Move the pipetting head to the back right position of the instrument.
- 

- 7 Holding the base with two hands, pack the instrument in the transport box.
-

## 8. Returning the LUTHOR single cell dispenser

The dedicated decontamination form (204QM778V0100) needs to be filled in and signed before the rented LUTHOR single cell dispenser is shipped back. The form can be obtained by emailing [support@lexogen.com](mailto:support@lexogen.com) (or on this page: [www.lexogen.com/docs/luthor-dispenser](http://www.lexogen.com/docs/luthor-dispenser)).

Once decontamination has been performed, and decontamination sheet has been filled in, please reach [support@lexogen.com](mailto:support@lexogen.com) for instructions on how to repackage the instrument appropriately and then proceed to shipment.

The instrument should be transported with care in packaging specified by Lexogen. Internal damage can occur if the instrument is subjected to excessive vibration or is dropped. If you have questions regarding proper decontamination or shipment, contact Lexogen technical support ([support@lexogen.com](mailto:support@lexogen.com)) for assistance.

## 9. Appendix A: Technical Assistance

For technical questions or assistance in solving a problem:

- Read the LUTHOR single cell dispenser Packaging Guide and/or User Guide (231UG794V0100) section specific to the step you are performing.
- See troubleshooting procedures in Appendix D of the LUTHOR single cell dispenser User Guide (231UG794V0100).

While using the LUTHOR single cell dispenser driver software, click on the tab on the right side of the window titled "FEEDBACK" to report any issue or feedback you might have. If additional assistance is required, contact your authorized Lexogen service provider or the Lexogen technical support at [support@lexogen.com](mailto:support@lexogen.com).

# 10. Appendix B: Maintenance

Do not service the equipment yourself. Service shall be carried out only by trained experts authorized by Lexogen. An improperly serviced instrument may lead to severe personal injury or death by exposure to mechanical hazards, and the risk of electric shock. Always wear protective gloves and eyewear to protect against potential biohazard exposure. Before cleaning, unplug the instrument. Do not use liquid or aerosol cleaning agents, always use a damp cloth.

# 11. Appendix C: Revision History

Publication No. / Revision Date	Change	Page
231UI795V0100 Sep. 16, 2024	Initial Release.	

Associated Products:

- 204 (LUTHOR High-Definition Single-Cell 3' mRNA-Seq Kit)
- 205 (LUTHOR High-Definition Pool Single-Cell 3' mRNA-Seq Library Prep Kit)
- 221 (LUTHOR High-Definition Single-Cell 3' mRNA-Seq Kit with UDI 12 nt Set B1)
- 231.04 (LUTHOR single cell dispensing Kit)

## LUTHOR single cell dispenser · Packing Guide

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