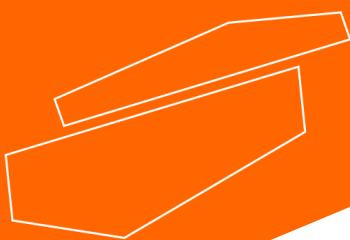




## TISSUE HOMOGENIZER, TH-2

*Please read the User Manual carefully before use, and follow all operating and safety instructions!*



### user manual

english

# User Manual

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## TISSUE HOMOGENIZER, TH-2

### Preface

Thank you for purchasing our product. Users should read this manual carefully, follow the instructions and procedures, and be aware of all preventive measures when using this instrument.

### Service

If help is needed, you can always contact your dealer or Labbox via [www.labbox.com](http://www.labbox.com).

Please provide the customer service representative with the following information:

- Serial number
- Description of the problem
- Your contact information

### Warranty

This instrument is guaranteed to be free from defects in materials and workmanship under normal use and service for a period of 24 months from the date of invoice. The warranty is extended only to the original purchaser and shall not apply to any product or parts that have been damaged due to improper installation, improper connections, misuse, accidents, or abnormal conditions of operation.

For claims under the warranty, please contact your supplier.

## **Preface**

Thank you for purchasing the THG80 Handheld Tissue Grinder. This user manual covers the functions and operating procedures of this device. Please read this manual carefully and keep it in a safe place.

## **Inspection**

Users receive the product, open the instrument box, check the inner packaging for damage, Under normal circumstances, any damage caused during transportation can be claimed from the transporter through appropriate channels.

Check the instrument and accessories against the packing list, if the instrument or accessories packaging error, quantity error, packaging or product damage, etc., please contact the seller or manufacturer within 7 days, more than this, time will not be handled in accordance with the principle of non-product quality problems.

## 1. Important operation information of the security

Before operation, please have a perfect conception of how to use the Instrument.

Read this manual carefully before using it.

## 2. Security

- Keep the instrument and electrical parts dry during operation, and it is strictly forbidden to operate with wet hands.
- The inner of the instrument should avoid contact with liquids, and do not immersing the instrument in liquids, so as not to cause a short circuit.
- Please use the matching charger that is packaged with the instrument. If you use other chargers, the device may not work properly and affect the product warranty.
- This grinder is a motor-driven instrument. You should not use this grinder to manually grind samples to prevent damage to the joints of the grinder.
- When placing the battery, the positive terminal of the battery should be facing up; avoid reverse direction of the battery when charging; idling is strictly prohibited.
- When using a grinder to grind samples, it is recommended that the volume of lysis solution does not exceed 150ul to prevent the lysis solution from splashing out during the grinding process.
- When the plastic grinding rod is worn, please replace it in time to avoid affecting the grinding efficiency.

 If there is any violation of the above matters, the consequences shall be borne by themselves.

## 3. Instrument maintenance and cleaning

The frequent use of instruments will inevitably cause different degrees of wear and abnormality. Therefore, the regular maintenance and troubleshooting of the instrument, plays a decisive role to guarantee the instrument in normal working, and extend the service life of the instrument. Please read the entire safety instructions before starting maintaining or cleaning the equipment:

- When the instrument is not used for a long time, the battery should be removed.
- When the instrument is not used for a long time, it should be stored in the original box or carton to prevent dust or moisture from entering and affecting the normal use of the instrument.
- When the battery is not used for a long time, it should be stored in a cool and dry environment. It is best stored when the battery is half-charged.
- Avoid contact between the instrument and water and other liquids to prevent them from entering the inside of the instrument and causing a short circuit.
- This instrument is not resistant to strong acids, acids and most organic solvents. Salty liquids are corrosive to the metal in the equipment. If the instrument accidentally comes into contact with the above chemical substances, it should be wiped clean with clean water immediately.
- For regular cleaning of the instrument, wipe it gently with a slightly damp cloth. Do not use an overly wet rag. Do not use corrosive liquids or detergents for cleaning.

#### **4. After Sale Service Commitment**

##### **A) Instructions for warranty**

The company will replace the instrument within 1 month from the date of delivery of the product itself.

During the 2 years (from the date of purchase) warranty period of the instrument, the company will provide warranty for non-human damage or faults caused by defects of the product itself. The warranty products shall be sent to the designated maintenance department by the company, and the user bears the cost of shipping back. The company will bear the freight of the instrument returning to the user.

For out of the warranty period and not covered by warranty scope, the company will charge the corresponding cost.

##### **B) Scope of Warranty**

Damage and normal use loss caused by accidental disasters, improper user use, wrong application, unauthorized maintenance or modification, do not fall within the above warranty scope.

## 01. Introduction

Tissue Homogenizer TH-2 is a small tissue grinder equipped with a rechargeable battery that relies on a motor-driven grinding head commonly used in laboratories to grind and mix tissue samples. It is widely used in liver, spleen, brain tissue, heart, etc. animal tissues, bone marrow and large intestine, tumor samples, plant tissue samples such as roots, leaves, flowers, and fruits, microbial samples such as bacteria and yeast, and grinding, crushing and homogenization of food and medicine.

### 1. Features

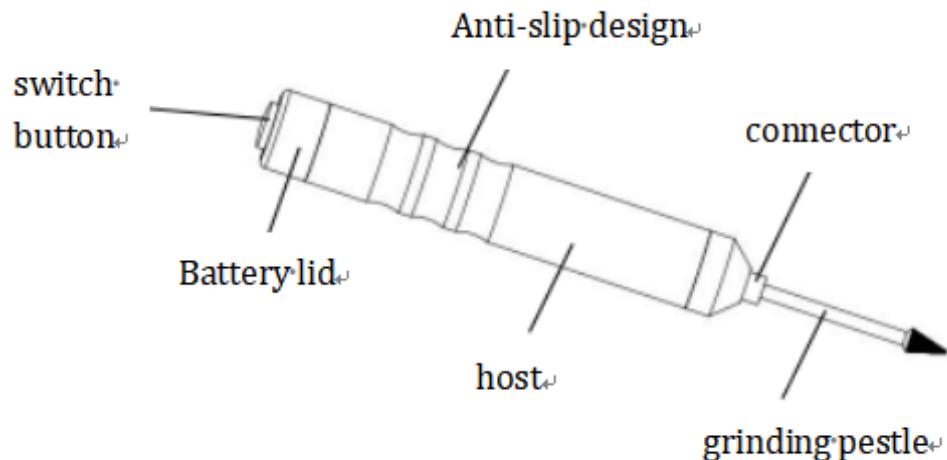
- Suitable for grinding samples in 1.5mL centrifuge tubes.
- It can be equipped with two kinds of grinding pestles, metal (optional) and plastic, to deal with various animal and plant materials.
- Aluminum alloy body, anti-slip treatment, safe operation and easy to control.
- Portable and compact, equipped with a portable charger, suitable for outdoor work.
- Equipped with two rechargeable lithium batteries for long-lasting battery life.
- Buckle structure adapter effectively locks the grinding pestle to avoid sample splashing.
- The stainless-steel grinding pestle is easy to disassemble, not easy to wear, and can be sterilized at high temperature.
- Corrosion-resistant and can be sterilized at high temperature

### 2. The basic parameters and function

|            |                  |
|------------|------------------|
| Mode       | TH-2             |
| Idle speed | 11000rpm         |
| Power      | 3.7V, 18650model |

|   |   |
|---|---|
| Stainless steel<br>grinding pestle size     | Length 7cm;<br>Pestle tip diameter 3.2mm;<br>Pestle head diameter 6.6mm;<br>Pestle shaft diameter 4.5mm |
| Disposable plastic<br>grinding pestle sizes | Length 7.3cm;<br>Pestle tip diameter 3mm;<br>Pestle head diameter 6.6mm;<br>Pestle shaft diameter 4.5mm |
| Rechargeable battery<br>charging time       | 4~6hours  |
| Rechargeable battery working<br>time        | 5~8 hours (depending on the load)   |
| Size  | L168×D26mm  |
| Weight                                      | 200g  |

### 3. Parts introduction



## 02. Operation Guide

### 1. Instrument operation

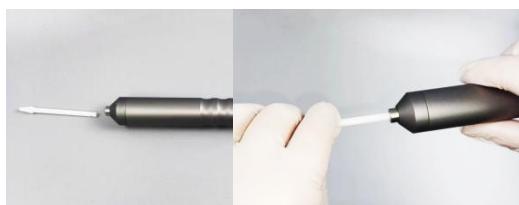
A) Unpack and place the handheld grinder on the work surface.



B) Unscrew the battery cover of the grinder, put the supplied rechargeable battery into the grinder (pay attention to the direction of the positive and negative poles of the battery, the positive pole of the battery should be facing up), and screw on the battery cover.



C) Hold the barrel of the grinder with your hands and insert the grinding rod of the required size into the grinder joint in the direction shown in the figure.



D) Insert the grinding rod into the centrifuge tube containing the sample and lysis solution (it is recommended that the volume of the lysis solution does not exceed 150ul); press the switch on the top of the grinder with your hand, and the grinder starts to work. If you need to stop the operation, you can press the switch again with your hand.



## 2. Battery pack charging

Unscrew the top of the grinder, take out the battery inside, and put in the charging adapter. Make sure the positive and negative poles are in the same direction. Connect the power supply and when fully charged, the indicator light of the charging base will turn from red to green. Place the charged battery into the barrel of the grinder and unscrew the top part of the grinder. Be careful not to turn the battery upside down. The positive terminal of the battery should be facing up.



### ⚠ Warning!!!

- Do not charge the battery pack in a humid or wet environment.
- Do not charge in high or low temperature environments. High temperatures may cause the battery to explode or burn, while low temperatures may cause battery performance to decrease.
- You should use the adapter charger provided by the manufacturer to avoid damaging the battery or causing safety hazards.
- During the charging process, if you find that the charger is overheated or the battery temperature is too high, you should stop charging immediately.
- After the battery is fully charged, the power supply should be cut off in time to avoid battery expansion or bulging caused by long-term charging.

### 03. Troubleshooting

| Troubleshooting                           | Failure cause  | Solutions  |
|---|--|--|
| Instrument not working                    | <ul style="list-style-type: none"> <li>Insufficient battery power</li> <li>Motor failure</li> <li>The sample exceeds the processing range of the instrument</li> <li>Button malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Recharge or replace the battery</li> <li>Repair or replace the motor</li> <li>Replace the sample</li> <li>Replace button</li> </ul> |
| There are unusual sounds during operation | <ul style="list-style-type: none"> <li>All parts of the instrument are not installed properly.</li> <li>Motor failure</li> </ul>   | <ul style="list-style-type: none"> <li>Reinstall all components</li> <li>Replace the motor</li> </ul>  |

### 04. Packing list

| No. | Item                               | Unit | Qty |
|-----|------------------------------------|------|-----|
| 1   | Host                               | Unit | 1   |
| 2   | Rechargeable battery               | Pcs  | 2   |
| 3   | Charger                            | Pcs  | 1   |
| 4   | Stainless steel grinding pestle    | Pcs  | 1   |
| 5   | Disposable plastic grinding pestle | Pcs  | 10  |

### **Nota importante para los aparatos electrónicos vendidos en España**

Instrucciones sobre la protección del medio ambiente y la eliminación de aparatos electrónicos:



Los aparatos eléctricos y electrónicos marcados con este símbolo no pueden ser eliminados en forma de residuos urbanos.

De conformidad con la Directiva 2012/19/UE, los usuarios de la Unión Europea de aparatos eléctricos y electrónicos, tienen la posibilidad de devolver sus RAEE para su eliminación al distribuidor o fabricante del equipo después de la compra de uno nuevo. La eliminación ilegal de aparatos eléctricos y electrónicos es castigada con multa administrativa.

### **Remarque importante pour les appareils électroniques vendus en France**

Informations sur la protection du milieu environnemental et élimination des déchets électroniques :



Les appareils électriques et électroniques portant ce symbole ne peuvent pas être jetés dans les décharges.

En réponse à la réglementation, Labbox remplit ses obligations relatives à la fin de vie des équipements électriques de laboratoire qu'il met sur le marché en finançant la filière de recyclage de ecosystem dédiée aux DEEE Pro qui les reprend gratuitement (plus d'informations sur [www.ecosystem.eco](http://www.ecosystem.eco)).

L'élimination illégale d'appareils électriques et électroniques est punie d'amende administrative.

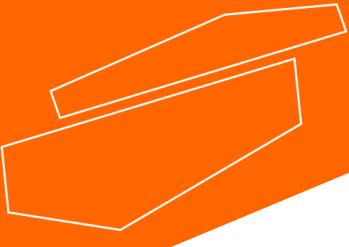
### **Nota importante per le apparecchiature elettroniche vendute in Italia**

Istruzioni sulla protezione ambientale e sullo smaltimento dei dispositivi elettronici:



Le apparecchiature elettriche ed elettroniche contrassegnate con questo simbolo non possono essere smaltite come rifiuti urbani.

In conformità con la Direttiva 2012/19 / UE, gli utenti dell'Unione Europea di apparecchiature elettriche ed elettroniche hanno la possibilità di restituire i propri RAEE per lo smaltimento al distributore o al produttore di apparecchiature dopo averne acquistato uno nuovo. La rimozione illegale di apparecchiature elettriche ed elettroniche è punibile con una sanzione amministrativa.



[www.labbox.com](http://www.labbox.com)