

# Herolab



Instruction Manual

**UV Transilluminators  
White Light Tables  
Blue Light Transilluminators**

## **UVT Series**

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## Dear Customer,

Thank you for buying one of our UVT Transilluminators.

All our products are developed and built with great care, keeping the needs of our customers as our main focus. We check each unit carefully before it leaves our workshop.

We therefore believe that you will be entirely satisfied with the design and operation of this unit. However, since even the currently best things can often be improved, we welcome any suggestion you might have.

Sincerely,

**Your**

**Herolab Team**

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## Safety Advice

### UV radiation is harmful to eyes and skin!

All Herolab UVT transilluminators are equipped with a UV impermeable cover. All the same, safety glasses or goggles protecting the eyes from UV radiation should be worn at all times, since accidental unprotected exposure of the eyes can lead to irreversible damage.

The skin is damaged by UV radiation as well, and the effects of longtime exposures are not yet well known.

If it is necessary to work without the protective cover, a face shield should be worn. The skin of the hands and arms should be protected by gloves and long sleeves.

### **Wear safety glasses (Cat. No. 29 93 100)! If necessary, wear face protection (Cat. No. 29 93 000)!**

The UV radiation of the Blue Light Transilluminator is neglectable and comparable with standard fluorescent tubes. Due to the rather powerful intensity of the blue light, one should not look into the light similar to any bright light source.

The voltage supplied must be the same as indicated on the name plate. The appliance may only be connected to a earthed outlet.

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## Operation

### Installation

Unpack the transilluminator and its power cord and check if anything is damaged.

**Do not use damaged appliances!**

For transport damage, notify the forwarder, for other damage, notify the manufacturer or distributor.

The transilluminator should be placed on a level work surface, so that the air can circulate free.

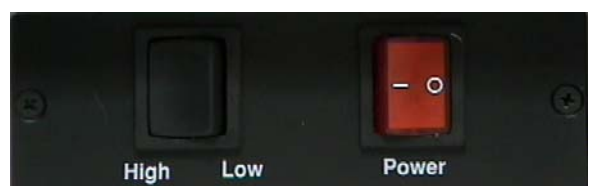
The voltage supplied must be the same as indicated on the name plate. The appliance may only be connected to an earthed outlet.

### Switches

Economy UVT, UVT-14, Blue Light



Standard UVT



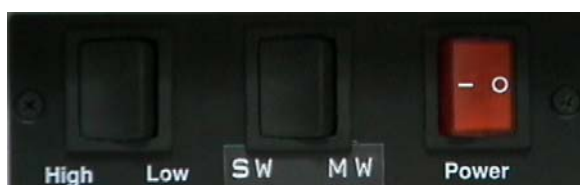
Standard Combined UV / White Light



Electronic Variable UVT



Multi Wave UVT (2 Wavelengths)



Multi Wave UVT (3 Wavelengths)



## **Operation - UV**

For combined UV / White Light models, set the selector switch to **UV**.

Check that the intensity switch is set to **High**. Only on High setting will all tubes light. Put the sample to be illuminated (e.g., the electrophoresis gel) onto the filter and close the protective cover (the Economy models have no protection cover). For your safety, wear UV protection glasses.

The cover stays open at any angle between 0° and 90°. For preparative work, it is recommended that it is used as supplementary face protection to the usual eye protection. During instant photography or photodocumentation it should be placed as shield between the UV table and the user. It cannot cover the gel in this case, because humidity from the gel condenses on the lower surface of the cover and blurs the photograph.

If one of Herolab's Darkroom Hood is used, or the transilluminator is part of a MiniDoc system, the protective cover is not necessary, because the hood is impermeable to UV and the transilluminator is switched on from outside. All the same, safety glasses should be worn, so that accidental opening cannot damage the eyes.

Switch on the **Power** switch, it will glow.

After all tubes have started, it is possible after about 10 seconds to set the intensity switch to **Low**. The intensity is then lowered to about 70 % of maximum intensity. Use the knob to adjust the intensity if you have a **Variable model**. This way, damage to the sample due to overexposure is reduced during preparative work.

Additional you can choose the wavelengths with a **Multi Wave model**.

Remark: The Multi Wave models with 3 wavelengths have no High/Low switch.

As soon as the UV light is no longer needed, turn the transilluminator off. For this, set the **Power** switch to the **0** position, so that it stops glowing.

## **Operation - White Light**

Place the sample on the white light plate.

For combined UV / White Light models, set the selector switch to **White**.

Using the **Power** switch, turn on the appliance.

When the white light is no longer needed, turn it off with the **Power** switch.

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## **Operation - Blue Light**

Place the sample on the blue light plate.

Using the **Power** switch, turn on the appliance.

Use the orange glasses or an appropriate filter to make parts of the sample visible.

When the blue light is no longer needed, turn it off with the **Power** switch.

## **Cleaning and Care**

We recommend to clean the filter plate and, if necessary, the housing with a damp cloth after each use to prevent buildup of dirt. If necessary, soap or a mild detergent can be used.

The housing and filter plate are stable to alcohol and other disinfectants, but the clear cover and the Blue Light Transilluminator are not. Remember that several window cleaners contain alcohol, they must not be used.

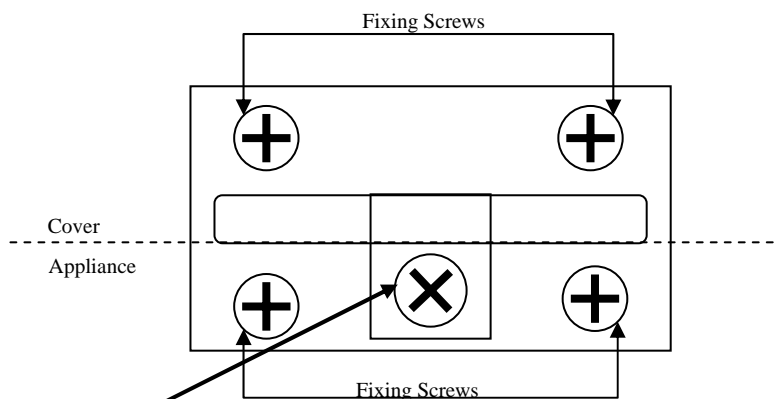
**Do not immerse the appliance in water!**

## **Maintenance**

**Always disconnect the appliance from the mains before working on the unit!**

### ***Adjusting the cover hinges***

Most of Herolab 's UVT transilluminators are equipped with special hinges to keep the cover open at any desired angle. They have to be readjusted from time to time.



Turn the **adjustment screw** clockwise to tighten the hinge, restraining the movement. Turn it counterclockwise to loosen the hinge, making movement easier.

## ***Exchanging the cover***

If the cover gets damaged, e.g. by shock, it can easily be replaced. A phillips screwdriver and a 7 mm wrench are needed. Loosen and remove the cover fixing screws, using the wrench to keep the nuts from turning. Remove the cover.

Fix the replacement cover using the same nuts and bolts. Take care that the two washers, one plastic and one metal, are used, with the plastic one nearest the cover.

**Always disconnect the appliance from the mains before working on the unit!**

## ***Exchanging the filter plate***

Herolab LongLife filters are sturdy and long-lived, however, they can be damaged, e.g. by using them as a cutting surface. With short wave UV radiation (254 nm), a diminution of the UV transmission (called solarization) is observed after several thousand hours of operation.

(The filter glass has high manufacturing tolerances in thickness which may show as streaks. The filter glasses are checked to make sure UV transmission is not impaired by these. Therefore, streaks in the filter glass cannot be recognized as grounds for complaints, because they do not have effects on function or durability of the appliance.)

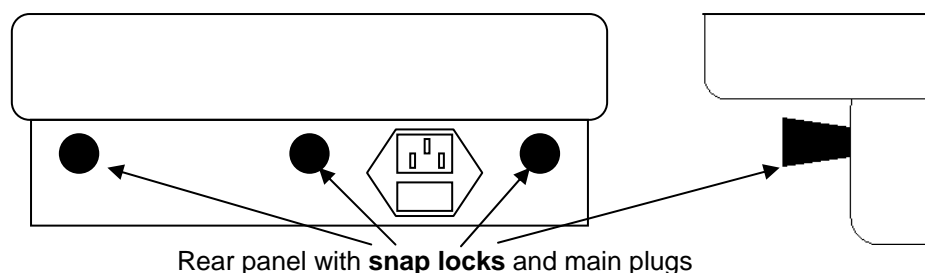
To remove the filter plate, remove the four screws at the lateral sides of the plate and lift it off. Set the replacement filter plate on the base and fix it again with the four screws.

## ***Exchanging tubes***

For all UV tubes, radiation intensity diminishes with time. It is therefore recommended to always exchange all tubes at the same time, to achieve homogeneous radiation intensity.

**Caution! The tubes get hot during operation! Let them cool down before touching them!**

To exchange the tubes, take off the filter plate as described above. Then pull open the three snap locks on the back (Standard and Advanced models) and take off the rear panel (taking off the rear panel is not necessary if you have a Economy, Blue Light or UVT-14 model)



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## **UV and White Light**

With  $\frac{1}{4}$  turn, free the tubes from the contacts and take them out upwards. Set in the new tubes from above and with  $\frac{1}{4}$  turn, fit them securely in the contacts (some resistance must be overcome).

After exchanging all tubes, put the rear panel back into place and fix it with the snap locks, which have to snap audibly. Replace the filter plate as described above.

## **Blue Light**

Press the red button at the mount for the tubes and take the tubes out of the mountings.

Plug in the new tubes in the mount against the resistance of the contact and lock them in place. Please check the right fit of the tubes.

Replace the filter plate as described above.

**Important Remark: Before reusing the unit, assemble it completely and check it is functioning properly!**



## Spare parts

### *Tubes*

<b>for</b>	<b>Description</b>	<b>Cat. No.</b>
<b>UVT-40</b>	<b>6 pieces / 15 watt</b>	
	254 nm (short wave)	29 84 000
	312 nm (mid-range)	29 84 100
	365 nm (long wave)	29 84 200
<b>UVT-28</b>	<b>8 pieces / 8 watt</b>	
	254 nm (short wave)	29 84 300
	312 nm (mid-range)	29 84 400
	365 nm (long wave)	29 84 500
<b>UVT-20</b>	<b>6 pieces / 8 watt</b>	
	254 nm (short wave)	29 84 300
	312 nm (mid-range)	29 84 400
	365 nm (long wave)	29 84 500
<b>UVT-14</b>	<b>4 pieces / 6 watt</b>	
	254 nm (short wave)	29 84 800
	312 nm (mid-range)	29 84 900
	365 nm (long wave)	29 85 000
<b>Combined UV / White Light</b>	<b>6 pieces / 8 watt UV and 3 pieces / 6 watt White Light</b>	
	254 nm (short wave)	29 84 300
	312 nm (mid-range)	29 84 400
	365 nm (long wave)	29 84 500
	6 watt White Light	29 84 600
<b>White Light Tables</b>	<b>2 pieces / 15 watt White Light</b>	
	15 watt White Light	29 84 700
<b>Blue Light Transilluminator</b>	<b>18 watt Blue Light</b>	29 84 650

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## **Replacement Filters with Stainless Steel Frame**

<b>for</b>	<b>Description</b>	<b>Cat. No.</b>
<b>UVT-40</b>	20 x 40 cm	29 80 100
<b>UVT-28</b>	22 x 28 cm	29 80 200
<b>UVT-20</b>	20 x 20 cm	29 80 000
<b>UVT-14</b>	14 x 11 cm	29 80 600
<b>Combined</b> with UV and White Light	20 x 20 cm each	29 80 300
<b>White Light</b>	20 x 40 cm	29 80 400

**Please ask for other spare parts or accessories!**

If you have any questions regarding maintenance or operation, please call us.

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