



# 900X MICROSCOPE

## INSTRUCTION MANUAL

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### Microscope Parts:

1. Eyepiece
2. Focus Knob
3. Stage
4. Stage Clips
5. Color Filter Wheel
6. Objective
7. Objective Turret(5x, 20x, 45x)
8. Illumination On/Off Switch and Mirror
9. Rubber Base
10. Microscope Arm
11. (5) Prepared Slides and (7) Blank Slides with Slide Case
12. (7) Slide Covers/Labels
13. (2) Collection Vials
14. Test Tube
15. Shrimp Hatchery
16. Petri Dish
17. Tweezers / Scalpel / Pipette / Stirring Rod\*
18. Specimen Slicer
19. Blue Dye, Red Dye, Shrimp Eggs, Sea Salt



**x1 INCLUDED**

**WARNING:**  
Contains button or coin cell battery.  
Hazardous if swallowed – see instructions.

**WARNING:**  
CHOKING HAZARD – Small parts.  
Not for children under 3 years.



**WARNING:**  
This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

\*Not suitable for children under 3 years of age. Contains functional sharp points.

### IMPORTANT SAFETY INSTRUCTIONS

READ AND FOLLOW THE INSTRUCTIONS BEFORE USE.  
KEEP THESE INSTRUCTIONS FOR LATER USE.

**• THIS MICROSCOPE SET IS INTENDED FOR CHILDREN OLDER THAN AGE 8.** CHILDREN SHOULD ONLY USE THIS DEVICE UNDER ADULT SUPERVISION. NEVER LEAVE A CHILD UNSUPERVISED WITH THIS DEVICE. ACCESSORIES IN THE EXPERIMENT KIT MAY HAVE SHARP EDGES AND TIPS. PLEASE STORE THE DEVICE AND ALL OF ITS ACCESSORIES AND AIDS OUT OF THE REACH OF YOUNG CHILDREN WHEN NOT BEING USED DUE TO A RISK OF INJURY.

**• CHEMICALS:** ANY CHEMICALS AND LIQUIDS USED IN CONJUNCTION WITH THE DEVICE SHOULD BE KEPT OUT OF REACH OF CHILDREN. DO NOT DRINK ANY OF THE CHEMICALS CONTAINED IN THIS SET. HANDS SHOULD BE WASHED THOROUGHLY UNDER RUNNING WATER AFTER WORKING WITH THESE CHEMICALS. IN CASE OF ACCIDENTAL CONTACT WITH EYES OR MOUTH, RINSE THE AFFECTED AREA WITH WATER. SEEK MEDICAL TREATMENT FOR ALLMENTS ARISING FROM CONTACT WITH THE CHEMICAL SUBSTANCE, AND TAKE THE CHEMICALS WITH YOU TO THE DOCTOR.

**• CHOKING HAZARD:** CHILDREN SHOULD ONLY USE DEVICE UNDER ADULT SUPERVISION. KEEP PACKAGING MATERIALS LIKE PLASTIC BAGS AND RUBBER BANDS OUT OF THE REACH OF CHILDREN AS THESE MATERIALS POSE A CHOKING HAZARD.

**• BUTTON/COIN BATTERY WARNING:** THIS PRODUCT CONTAINS A BUTTON OR COIN CELL BATTERY. A SWALLOWED BUTTON OR COIN CELL BATTERY CAN CAUSE INTERNAL CHEMICAL BURNS IN AS LITTLE AS TWO HOURS AND LEAD TO DEATH. DISPOSE OF USED BATTERIES IMMEDIATELY. KEEP NEW

AND USED BATTERIES AWAY FROM CHILDREN. IF YOU THINK BATTERIES MIGHT HAVE BEEN SWALLOWED OR PLACED INSIDE ANY PART OF THE BODY, SEEK IMMEDIATE MEDICAL ATTENTION. • A SWALLOWED BUTTON OR COIN CELL BATTERY CAN CAUSE INTERNAL CHEMICAL BURNS IN AS LITTLE AS TWO HOURS AND LEAD TO DEATH DUE TO CHEMICAL BURNS AND POTENTIAL PERFORATION OF THE ESOPHAGUS. • DISPOSE OF USED BATTERIES IMMEDIATELY. FLAT/DRAINED BATTERIES CAN STILL BE DANGEROUS

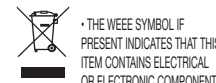
• KEEP NEW AND USED BATTERIES AWAY FROM CHILDREN. • IF YOU THINK BATTERIES MIGHT HAVE BEEN SWALLOWED OR PLACED INSIDE ANY PART OF THE BODY, SEEK IMMEDIATE MEDICAL ATTENTION. • IF YOU SUSPECT YOUR CHILD HAS SWALLOWED OR INSERTED A BUTTON BATTERY IMMEDIATELY CALL THE POISONS CONTROL HOTLINE AND SEEK IMMEDIATE MEDICAL ATTENTION. • EXAMINE DEVICES AND MAKE SURE THE BATTERY COMPARTMENT IS CORRECTLY SECURED, E.G. THAT THE SCREW OR ANOTHER MECHANICAL FASTENER IS TIGHTENED. DO NOT USE IF COMPARTMENT IS NOT SECURE. • TELL OTHERS ABOUT THE RISK ASSOCIATED WITH BUTTON BATTERIES AND HOW TO KEEP THEIR CHILDREN SAFE.

**• RISK OF FIRE:** DO NOT PLACE DEVICE, PARTICULARLY THE LENSES, IN DIRECT SUNLIGHT. THE CONCENTRATION OF LIGHT RAYS COULD CAUSE A FIRE.

**• DO NOT DISASSEMBLE THIS DEVICE.** IN THE EVENT OF A DEFECT, PLEASE CONTACT YOUR DEALER. THE DEALER WILL CONTACT THE CUSTOMER SERVICE DEPARTMENT AND CAN SEND THE DEVICE IN TO BE REPAIRED IF NECESSARY.

**• DO NOT SUBJECT THE DEVICE TO TEMPERATURES EXCEEDING 60 °C (140 °F).**

**• DISPOSAL:** KEEP PACKAGING MATERIALS, LIKE PLASTIC BAGS AND RUBBER BANDS, AWAY FROM CHILDREN AS THEY POSE A RISK OF SUFFOCATION. DISPOSE OF PACKAGING MATERIALS AS LEGALLY REQUIRED. CONSULT THE LOCAL AUTHORITY ON THE MATTER IF NECESSARY AND RECYCLE MATERIALS WHEN POSSIBLE.



• THE WEEE SYMBOL IF PRESENT INDICATES THAT THIS ITEM CONTAINS ELECTRICAL OR ELECTRONIC COMPONENTS WHICH MUST BE COLLECTED AND DISPOSED OF SEPARATELY.

• NEVER DISPOSE OF ELECTRICAL OR ELECTRONIC WASTE IN GENERAL MUNICIPAL WASTE. COLLECT AND DISPOSE OF SUCH WASTE SEPARATELY.

• MAKE USE OF THE RETURN AND COLLECTION SYSTEMS AVAILABLE TO YOU, OR YOUR LOCAL RECYCLING PROGRAM. CONTACT YOUR LOCAL AUTHORITY OR PLACE OF PURCHASE TO FIND OUT WHAT SCHEMES ARE AVAILABLE.

• ELECTRICAL AND ELECTRONIC EQUIPMENT CONTAINS HAZARDOUS SUBSTANCE WHICH, WHEN DISPOSED OF INCORRECTLY, MAY LEAK INTO THE GROUND. THIS CAN CONTRIBUTE TO SOIL AND WATER POLLUTION WHICH IS HAZARDOUS TO HUMAN HEALTH, AND ENDANGER WILDLIFE.

• IT IS ESSENTIAL THAT CONSUMERS LOOK TO RE-USE OR RECYCLE ELECTRICAL OR ELECTRONIC WASTE TO AVOID IT GOING TO LANDFILL SITES OR INCINERATION WITHOUT TREATMENT.

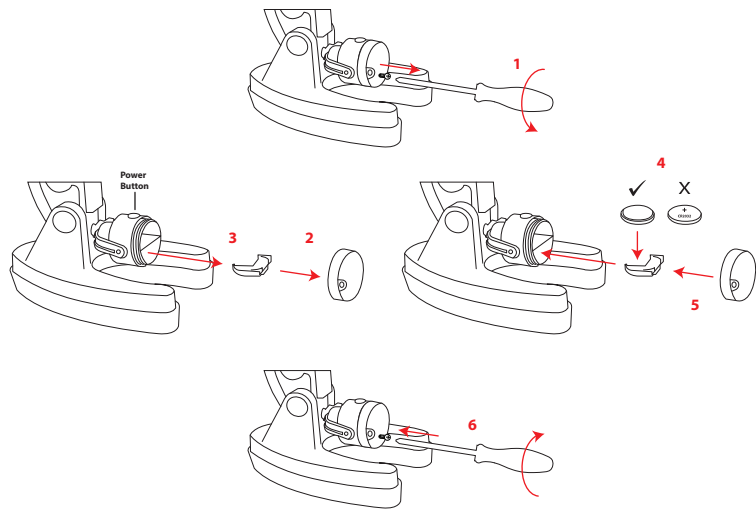
Customer Service: Call 1-866-252-3811

### How Do I Use My Microscope

Before you use your microscope, make sure that the table, desk or surface that you place it on is stable and is not subject to vibration. If the microscope needs to be moved, hold it by the arm and base while carefully transferring it. Once the microscope is in a suitable location and the batteries are installed, check the light source to make sure that it illuminates. Use a microfiber cleaning cloth to gently wipe the lenses off. If the stage is dirty with dust or oil, carefully clean it off. Make sure that you only raise and lower the stage using the focus adjustment knob.

### Install/Replace Coin Battery (Requires 1xCR2032 battery)

1. Remove the safety screw from the cover.
2. Remove the battery cover.
3. Slide out the coin battery holder.
4. Install coin battery with the positive (+) polarity facing down and the negative (-) polarity facing up on the holder.
5. Replace the battery cover.
6. Screw in the safety screw back to the cover.



### How Do I Operate The Illumination?

Locate the mirror/light on the base of the microscope. Flip the mirror/light with the light facing up and press the button to power on the light. This microscope is equipped with an incandescent light that illuminates the specimen from below.

### How Do I Adjust My Microscope Correctly?

Place the microscope in a suitable location as described above, and sit in a comfortable viewing position. Always start each observation with the lowest magnification. Adjust the distance of the microscope stage so that the stage is in the lowest position — farthest away from the turret head. Turn the objective turret until it clicks into place at the lowest magnification (Objective: 5x/Magnification: 100x). Note: Before you change the objective setting, always make sure the microscope stage is farthest away from the turret by rotating the focus knob. Separating the stage and turret by rotating the focus knob will avoid causing damage to the specimen slide or microscope. When starting an observation, always start with the 5x objective in the rotating head.

### How Do I Observe The Specimen?

Sitting in your location with adequate illumination chosen from the color filter wheel, the following basic rules should be observed. Start with a simple observation at the lowest magnification. Position the object or specimen in the middle of the stage under the stage clips, centered over the lower light. Focus the image by rotating the focus knob until a clear image appears in the eyepiece.

Place the prepared slide directly under the objective on the microscope stage and secure it with the stage clips. The prepared slide should be located directly over the lower illumination. Look through the eyepiece and carefully turn the focus knob until the image appears clear and sharp. Now you can select a higher magnification by rotating to the 15x/300x objective turret. Higher levels of magnification can be achieved by turning the objective turret to a higher setting (300x or 900x). Following this procedure creates a steady increase of magnification without overpowering the view of the object. The following magnification order should be used: 100x, 300x then 900x. Each time the magnification changes (due to the

objective change), the image sharpness must be readjusted with the focus knob. When doing this, be careful because if you move the microscope stage too quickly, the objective and the slide could come into contact and cause damage to the slide or microscope.

For transparent objects (e.g. sea salt), light is projected by the lower light traveling from below the stage, through the objective and eyepiece, and finally into your eye. This process of light transmission is known as microscopy. Many micro-organisms found in water, plant components and the smallest animal parts are transparent in nature. Opaque specimens, on the other hand, will need to be prepared for viewing. Opaque specimens can be made transparent by a process of treatment and penetration with the correct materials (media), or by slicing. You can read more about creating specimens in the enclosed microscope experiments booklet.

### Magnification Guide:

Eyepiece	Objective	Power
20x	5x	100x
20x	20x	400x
20x	45x	900x

### Troubleshooting Guide:

Problem	Solution
No recognizable image	Turn on light, Readjust focus, Start with the lowest power objective (5x)
No image	Center object on slide under lowest power objective
No light	Replace batteries, Check on/off position

### Did You Know?

The highest magnification is not always the best for every specimen!

### Available Downloads Visit:

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

