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## **OPERATION MANUAL**

**ISM-ZS45**  
**Zoom Stereo Microscope**



## 1. BRIEF

ISM-ZS45 series stereomicroscope are binocular stereomicroscope, can magnify a tiny object to an erecting stereo image. They have the character of comparatively long working distance, wide field, high image quality and a stepless zoom ranging. They are equipped with multifunctional illuminating devices. Users can choose the adjustable reflected illuminator of the halogen lamps or circular shaped fluorescent lamps and transmitted illuminator of the halogen lamps or the fluorescent lamps according to requirement. Especially suitable for using in teaching, observing study and scientific research etc. This zoom stereomicroscope is of sound quality and with complete accessories. It is simply to operate and convenient to use. It can be used for observing study, biological anatomy in medical and hygienic work, cultural education and scientific research, agricultural and forestry, geology, pearls and jewels, public security act units. Also, it can be used for testing, installing and repairing tiny precise spare parts in electronics industry, instrument and meter trade etc.

## 2. CHARACTERISTICS

- 1) The optical system has two parts of left and right; they are assembled in a same unit and use the same magnification, focus and binocular.
- 2) The object is imaged in two eyes, as two eyes observe directly, so we can see the straight image by eyepieces, the same direct as object, so that the subject is seemed really stereo.
- 3) As the continue change of magnification is achieved by changing the air gap of zoom objective, the image of subject observed will not disappear when the magnification is changing. This leads to convenience and developed working efficiency.
- 4) User can read the magnification of zoom objectives more visually and conveniently, and adjust magnification more rapidly and freely due to the magnification marks curved in the rotation knobs for magnification.
- 5) The angle of outcome optical oblique angle is 45°, which makes it easy for users to observe.
- 6) The rectangular prism group in system turns the image to be positive. Users can observe a positive image on focal surface, which is of the same direction and position with the subject.

- 7) Special equipped electric light source has the function of reflecting illuminating and transmitting illuminating.

## 3. SPECIFICATION

- 1) This zoom stereo-microscope with a magnification range of 7X---45X
- 2) The working distance of this microscope is 95mm
- 3) The main technical data are as follows:

| Eyepiece              | Magnification and visual field           | Objective (0.7X4.5X) |
|-----------------------|--|----------------------|
| 10X                   | Total magnification<br>Visual field (MM) | 7X-45X<br>20mm       |
| Working distance (MM) |  | 95                   |

- 4) The eyepiece technical data

|                        |     |
|------------------------|-----|
| Eyepiece Magnification | 10X |
| FIELD OF VIEW (mm)     | 20  |

- 5) The focus adjusting range of this microscope is 60mm.
- 6) The inter-pupillary adjustment range is 55mm---75mm
- 7) The power source for instrument is 220V, the lamp is 6V/20W

## 4. MAINTENANCE

- 1) Place the microscope in a cool; dry place where is free from dust, acid, alkali, steam etc.
- 2) Do not disassemble lens by userself as they all have been pre-adjusted and tested. Should filth is found on the lens, it would be cleaned gently with absorbent cotton with xylene. If alcohol is used, be careful not to let it soak into lens, or lens will come unglued. Dust on the lens can be blowed with a blower or cleaned gently with a clean writing brush, lens-cleaning paper etc. Be more careful not to touch optical elements when clean the mechanical part and smear corrosiveness lubrication/lubricant oil. Should touch it, clean it at once to avoid mould.
- 3) Do switch off power after using of instrument, pull out the plug when the instrument is not in use for a long time.
- 4) Handle the instrument carefully and gently during transport. It is strictly forbidden to put upside down.