Inverted Biological Microscope - LED Phase Contrast Cell Culture Microscope - 4X-40X LWD, FN 22

Model **MSMSC-IV52BNSWISS** | Brand **Master Science**







The Master Science Inverted Biological Microscope is built on an infinity optical system for viewing cultures from underneath, directly in their vessels. It suits live-cell imaging, transparent liquid tissues and day-to-day monitoring of cultures in dishes and flasks.

KEY HIGHLIGHTS

- Cultures stay in their vessels
- Unstained cells made visible
- Any common dish size
- Comfortable long sessions
- Fits in a flow hood

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Overview

Long working distance plan objectives, a push-pull phase contrast slider and a long-life LED lamp make the Master Science Inverted Biological Microscope quick to set up. Its compact, integrated body fits inside laminar flow hoods, and a built-in 0.75X C-mount on the lower left of the base keeps the camera out of the working area.

For slide-based work on an upright stand, see the Master Science trinocular biological microscope.

Key Benefits

Cultures stay in their vessels
: the Master Science Inverted Biological Microscope views dishes and flasks from below.

Unstained cells made visible
: push-pull phase contrast slider.

Any common dish size
: four quick-release Petri dish holders.

Comfortable long sessions
: 45° head and 22 mm high eye point eyepieces.

Fits in a flow hood
: compact integrated body with a rear carrying design.

Technical Specifications

GENERAL

General	Specifications of the Master Science Inverted Biological Microscope are given below.
Brand	Master Science
Model Number	MSMSC-IV52BNSWISS
SKU	MSMSC-IV52BNSWISS
Observation Tube	Tilting trinocular, interpupillary distance 53-75 mm, light split 100:0 / 0:100
Viewing Head	Siedentopf head, inclined at 45°
Eyepiece	Wide field WF10X/22 mm; centering telescope
Objective 4X	Infinity LWD plan achromatic, Plan 4X/0.12, W.D. 10.8 mm
Objective 10X PH	Infinity LWD plan achromatic phase contrast, Plan 10X/0.25 PH, W.D. 4.1 mm
Objective 20X PH	Infinity LWD plan achromatic phase contrast, Plan 20X/0.45 PH, W.D. 5 mm
Objective 40X	Infinity LWD plan achromatic, LACH Plan 40X/0.60, W.D. 3.5 mm
Nosepiece	Quintuple nosepiece, ball-bearing, with anti-fungus treatment
Focusing	Coaxial coarse and fine focusing with tension adjustment and upper limit stop; fine graduation 2 µm
Stage	Fixed stage 227 x 208 mm; mechanical stage with 135 x 77 mm travel
Glass Round Stage Plate	Outer φ118 mm, inner φ68 mm
Petri Dish Holder 1	Locating slot 86 x 129.5 mm, for φ90 mm round dishes
Petri Dish Holder 2	Locating slot 34 x 77.5 mm, for φ68.5 mm round dishes
Petri Dish Holder 3	Locating slot 57 x 82 mm, for φ60 mm round dishes
Petri Dish Holder 4	Locating slot 29 x 77.5 mm, for φ35 mm round dishes
Transmitted Illumination	White LED, adjustable brightness; push-pull condenser, working distance 55 mm; green filter
Phase Contrast Ring Plate	10X, 20X, 40X (20X and 40X in one unit)
Camera Port	Built-in 0.75X C-mount (camera not included)
Optics	Infinity optical system

DIMENSIONS & WEIGHT

External Dimensions (L x W x H)	486 x 255 x 537 mm

COMMON PROBLEMS THIS MICROSCOPE SOLVES

Common Problems This Microscope Solves	Checking cell cultures on an ordinary microscope is awkward for several reasons.
Common Problems This Microscope Solves	Flasks and dishes do not fit under an upright objective:: the objectives sit below the stage.
Living cells are nearly invisible in brightfield	: phase contrast shows them without staining.
Dishes slide about on the stage	: matched holders lock each size in place.
No space in the hood	: the compact body is designed to work inside it.

The Master Science Inverted Biological Microscope is ideal for

- **Live-cell imaging**
- **Transparent liquid tissues**
- **Dynamic monitoring of cultures in their vessels**
- **Cell culture laboratories**

Viewing

- Siedentopf head inclined at 45° with 53-75 mm interpupillary range
- 22 mm wide-field, high eye point eyepieces with adjustable diopters
- Usable while wearing glasses

Illumination and Imaging

- Long-life LED: stable, uniform, glare-free light with continuously adjustable intensity
- Push-pull phase contrast slider for quick phase observation
- Built-in 0.75X C-mount adapter compatible with most mainstream digital cameras
- Camera port on the lower left of the base leaves the workspace clear

Body and Stage

- Integrated, space-saving modular design for laminar flow hoods and small laboratories
- Portable rear design for safe relocation
- Quick-release sample holder with several Petri dish holders
- Flat stage surface for irregularly shaped dishes

Optional Accessories

- 3-channel digital LED fluorescence attachment
- Plan Fluor 10X/20X/40X PH long working distance phase contrast objectives