Research Polarizing Microscope - Trinocular Reflected and Transmitted Light - 5X-60X, 6V/30W Halogen

Model **MSMSC-P41MSWISS** | Brand **Master Science**





The Master Science Research Polarizing Microscope uses an infinity optical system in a modular stand that carries both an epi-illumination system and transmitted illumination. Its objectives are infinity-corrected, strain-free and long working distance, which is what polarized light measurement requires.

KEY HIGHLIGHTS

- Opaque and transparent specimens
- Reliable polarization results
- Conoscopic observation
- Angle measurement
- Imaging in low light

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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Overview

A push-in Bertrand lens, three compensators and a graduated rotating stage with 6′ vernier make the Master Science Research Polarizing Microscope suitable for research and inspection in geology, chemical engineering, medicine and pharmaceuticals. It also handles crystal phase observation of liquid polymer materials, biopolymers and liquid crystal materials.

For routine transmitted-light teaching work, see the Master Science binocular polarizing microscope.

Key Benefits

Opaque and transparent specimens
: the Master Science Research Polarizing Microscope has reflected and transmitted light.

Reliable polarization results
: strain-free long working distance plan objectives.

Conoscopic observation
: push-in, centre-adjustable Bertrand lens.

Angle measurement
: stage graduated through 360° with 6′ vernier.

Imaging in low light
: trinocular tube sends 100% of the light to the camera.

Technical Specifications

GENERAL

General	Specifications of the Master Science Research Polarizing Microscope are given below.
Brand	Master Science
Model Number	MSMSC-P41MSWISS
SKU	MSMSC-P41MSWISS
Observation Tube	Tilting trinocular, split ratio 100:0 or 0:100
Viewing Head	Siedentopf head, inclined at 30°
Eyepiece	WF10X/22 mm; reticule eyepiece 10X/22 mm (graduation 0.1 mm/div.)
Objectives	Infinity PL L5X/0.12, W.D. 26.1 mm; polarizing objectives 10X, 20X, 60X
Nosepiece	Inward-facing quadruple nosepiece, ball-bearing positioning
Focusing	Coaxial coarse and fine focusing with adjustable coarse tension and limit locking device; fine graduation 2 µm
Stage	Mechanical X-Y rotating stage, Φ150 mm; 360° graduations; vernier scale 6′; centre-adjustable with locking device
Epi-illumination System	6V/30W halogen lamp, adjustable brightness; built-in field and aperture diaphragms; filter changer (yellow, blue, green, ground glass)
Epi Analyzer and Polarizer	Analyzer 360° rotatable with scale and fine vernier; polarizer 360° rotatable
Intermediate Tube	Push-in Bertrand lens, centre-adjustable; compensators: gypsum (λ), mica (1/4λ) and quartz wedge
Transmitted Illumination	6V/30W halogen lamp, adjustable brightness, adjustable lamp centre; Abbe condenser N.A. 1.25, height-adjustable; blue filter; frosted glass
Transmitted Polarizer	360° rotatable with 4 readings (0°, 90°, 180°, 270°)
Optics	Infinity optical system

COMMON PROBLEMS THIS MICROSCOPE SOLVES

Common Problems This Microscope Solves	Serious polarized light work exposes the limits of a basic stand.
Lens strain adds false birefringence	: strain-free objectives keep the background clean.
Interference figures cannot be seen	: a Bertrand lens pushes into the path when needed.
Retardation is hard to judge	: gypsum, mica and quartz wedge compensators are provided.
Dim images are difficult to photograph	: the 0:100 setting directs all light to the camera port.

Applications

The Master Science Research Polarizing Microscope is widely applied in: Geology Chemical engineering Medicine and pharmaceuticals Liquid polymer, biopolymer and liquid crystal studies Research institutions and universities

Optics

- Infinity optical system with modular functional design
- Infinity-corrected, strain-free, long working distance plan objectives
- Wide-field plan eyepieces with Φ22 mm field
- Polarizing unit moves in or out of the light path; polarizer and analyzer both rotate 360°

Mechanics and Illumination

- Coaxial coarse and fine focusing with adjustable coarse tension and limit lock; 2 µm fine graduation
- Rotatable stage with 360° graduations, 6′ vernier, adjustable centre and locking device; vertical stroke up to 30 mm
- Wide-range power supply with 6V/30W halogen illumination and adjustable brightness
- Trinocular tube switches freely between viewing and photomicrography