The Bausch & Lomb

ANALYZER *and* POLARIZER

(POLAROID)

for use with

BIOLOGICAL MICROSCOPE

Directions for Use

BAUSCH & LOMB

OPTICAL COMPANY ROCHESTER 2, N. Y.

Cat. No. 31-57-11 Cap Analyzer.
Cat. No. 31-57-15 Disc Polarizer.
Cat. No. 31-57-37 Body Tube Analyzer.
Cat. No. 31-57-38 Disc Polarizer.
Cat. No. 31-57-44 Quarter Wave Plate.
Cat. No. 31-57-45 Sensitive Tint Plate.

Directions for Use

The polarizers and analyzers are made of high grade polarizing sheeting laminated between glass cover plates.

The No. 31-57-11 Cap Analyzer fits over the standard B&L eyepiece. It is recommended for use on monocular microscopes.

The No. 31-57-15 Disc Polarizer fits into the substage filter slot on B&L ring type substage.

The No. 31-57-37 Body Tube Analyzer fits into the nosepiece supporting bracket on the B&L C, CC, DDE, E or T stands.

To insert the unit, remove the body tube and drop the unit into the exposed aperture above the nosepiece. This analyzer is recommended for binocular microscopes.

The No. 31-57-38 Disc Polarizer fits into the top of the swing-out portion of the centerable substage. To insert it, swing this part out, drop in the disc, and swing the part back. The disc can then be rotated, using the knurled head as a handle.

The No. 31-57-44 Quarter Wave Plate and the No. 31-57-45 Sensitive Tint Plate work in conjunction with the Cap Analyzer. They fit inside the latter, and are brought to correct mutual alignment by the pin and slot arrangement.

The retardation plates are used in the detection of weak bi-refringence, and the determination of optical sign of a crystal. For detailed descriptions on the use of these accessories the reader is referred to

"Manual of Petrographic Methods" by Johannsen.

Scribed lines on the 31-57-38 polarizer and analyzers and the handle on 31-57-15 polarizer indicate the plane of vibration. The normal position used by crystallographers and petrographers is with the polarizer plane of vibration vertical and the analyzer horizontal. At this "crossed polarizer" position the background of the microscope field becomes a deep blue-black and bi-refringent objects stand out as white or colored against this dark background.

CAUTION: Do not focus a strong beam of light on the polarizer or analyzer. If it is necessary to use an arc lamp or an incandescent lamp of over 100 watts for illumination, be sure to place a water cell containing a 2% solution of copper sulphate between the arc and the microscope. Heat above 150°F destroys the completeness of polarization of the polarizing material.

D1-518, 500, X-52