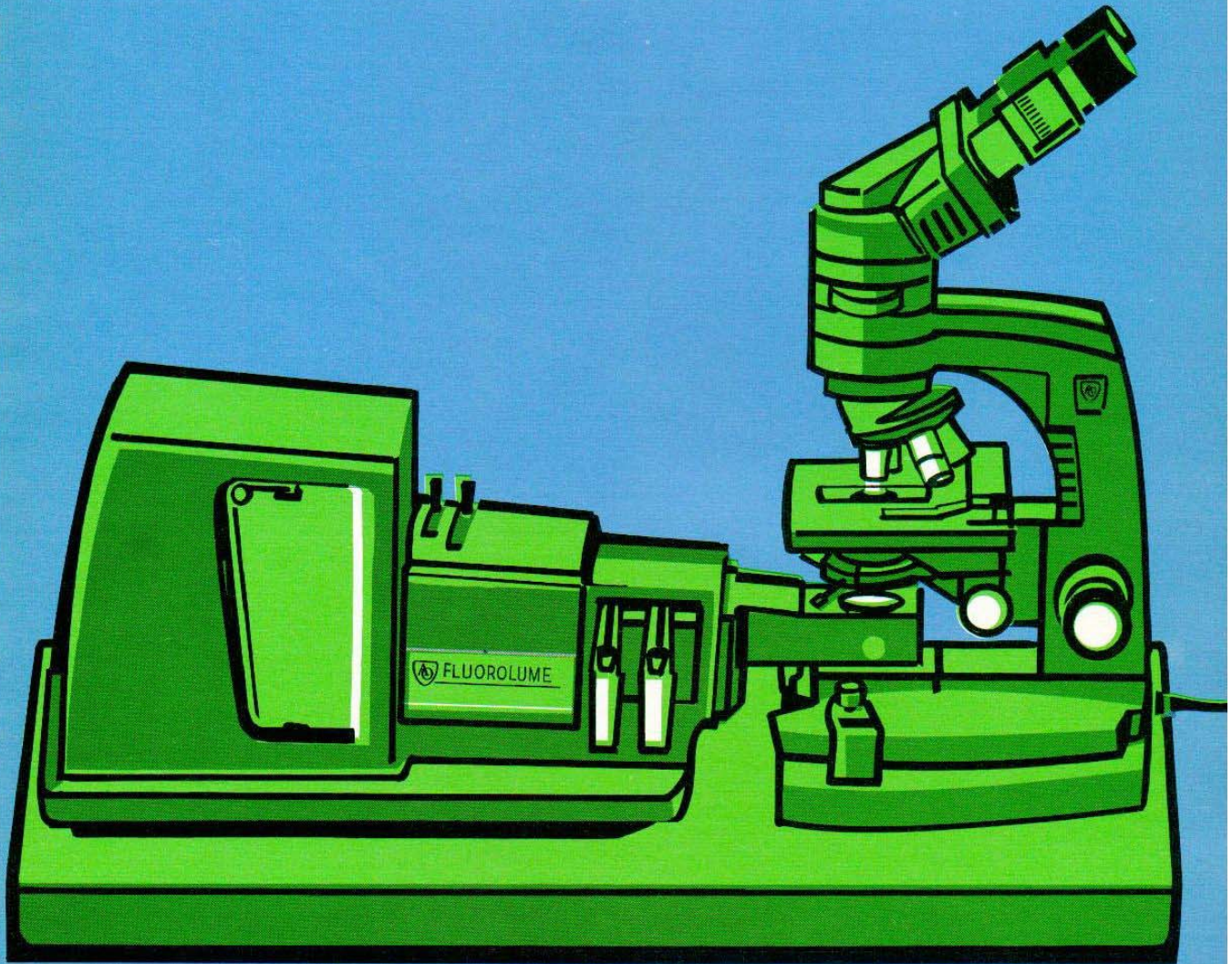


AO FLUORESCENCE

MICROSCOPE and ILLUMINATOR



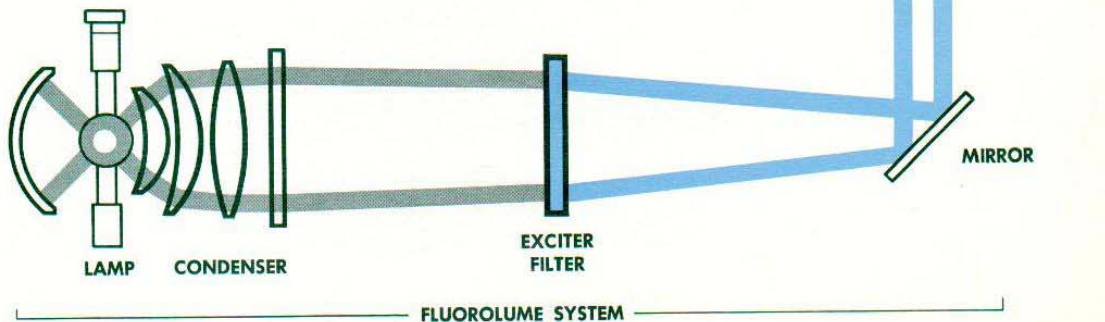
AO INSTRUMENT COMPANY

BUFFALO, NEW YORK 14215

Your success in fluorescence microscopy will depend, to a great extent, on the right combination of microscope and illuminator. Such combination should consist of the following essential instrumentation.

- a high pressure 200 watt mercury arc source rich in ultraviolet.
- an exciter filter, between the light source and specimen, to selectively pass exciting wavelengths through the microscope condenser and into the specimen to stimulate the latter's specific fluorescent characteristics.
- an efficient, top optical and mechanical quality microscope equipped with interchangeable condensers: dark field for fluorescent anti-body techniques and bright field condenser for acid-fast, auramine, rhodamine, acridine and other related primary and secondary fluorescence techniques . . . or for conventional dark field and bright field microscopy. Choice of monocular, binocular or trinocular body as required.
- a barrier filter, between the microscope objective and viewer, to effectively bar the transmission of undesired exciting wavelengths and pass only the fluorescing wavelengths emitted by the specimen.
- an in-base illuminator for quick and easy changeover from UV to tungsten light.

Whether your work is in research, education, or routine fluorescence microscopy . . . AO's complete package of FLUORESTAR AND FLUOROLUME is the answer.



AO FLUORESTAR

EYEPIECES

- 10X Wide Field
- High Eyepoints

FILTER TURRET

- Supplied with three most popular Barrier Filters OG1, EK2A, GG9 . . . others may be added into upper revolving turret for use individually or in combination with any of the basic three filters
- Clear apertures at "0" positions

QUADRUPLE NOSEPIECE

- Supplied with four objectives 10X, 20X, 45X and 100X infinity corrected achromatic objectives
- 50X or 100X oil immersion objectives, with iris diaphragm, are also available

UNGRADUATED MECHANICAL STAGE

- Graduated mechanical stage also available

CONDENSERS

- Dark Field Condenser in centerable mount with funnel stop for 100X objective
- also
- Abbe Condenser N.A. 1.25 in fixed mount

IN-BASE ILLUMINATOR

- Includes variable transformer
- Ideal for quick and easy switchover to tungsten illumination.

All essential optical surfaces of the FLUORESTAR are AMERICOTE . . . to decrease internal reflection, increase light transmission and improve image contrast !!

**PLUS SUPERIOR
OPTICAL PERFORMANCE
with AO's
INFINITY-CORRECTED
SYSTEM**



The new infinity-corrected optical system gives you resolution, color correction and flatness of field never before possible. This means crisper, sharper visual images and markedly superior photomicrographs. Also, this new optical system makes possible a vastly improved method of focusing. Only the objective moves when you focus . . . body and stage remains motionless.



catalog number **L10MU-FDW**

BODY: Inclined Monocular "M" #1041; also Double Turret Filter Holder and Barrier Filters, #1110

STAGE: Ungraduated, Mechanical #1063

FOCUSABLE NOSEPIECE: Quadruple Revolving

NEW INFINITY-CORRECTED FLAT FIELD ACHROMATIC OBJECTIVES: 10X, 20X, 45X, 100X

CONDENSERS: Dark Field Condenser in centerable mount with funnel stop for 100X objective, also N.A. 1.25 Abbe Condenser in fixed mount with iris

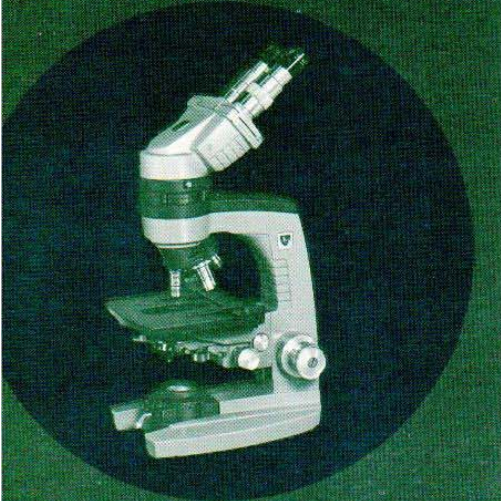
SUBSTAGE EQUIPMENT: Built-in Base Illuminator and Transformer

EYEPIECE: 10X Wide Field

Price **\$824.00**



Above Model L10MU-FDW with **FLUOROLUME** Model 645 and Height Adapter 636 complete..... **\$1,618.00**



catalog number **L10BU-FDW**

BODY: Inclined Binocular "B" #1042A; also Double Turret Filter Holder and Barrier Filters, #1110

STAGE: Ungraduated, Mechanical #1063

FOCUSABLE NOSEPIECE: Quadruple, Revolving

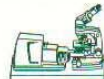
NEW INFINITY-CORRECTED FLAT FIELD ACHROMATIC OBJECTIVES: 10X, 20X, 45X, 100X

CONDENSERS: Dark Field Condenser in centerable mount with funnel stop for 100X objective, also N.A. 1.25 Abbe Condenser in fixed mount with iris

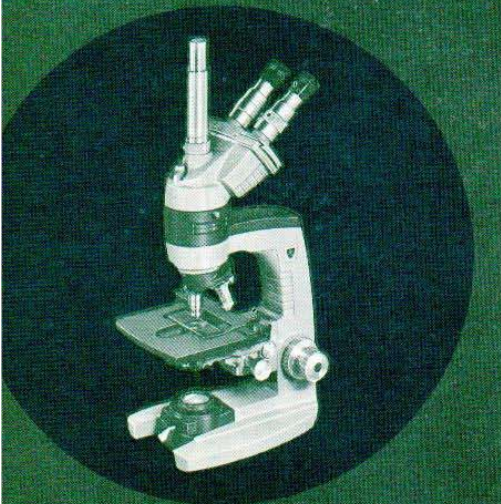
SUBSTAGE EQUIPMENT: Built-in Base Illuminator and Transformer

EYEPIECES: 10X Wide Field, Pair

Price **\$1,099.00**



Above Model L10BU-FDW with **FLUOROLUME** Model 645 and Height Adapter 636 complete..... **\$1,893.00**



catalog number **L10TU-FDW**

BODY: Inclined Trinocular "T" #1043A; also Double Turret Filter Holder and Barrier Filters, #1110

STAGE: Ungraduated, Mechanical #1063

FOCUSABLE NOSEPIECE: Quadruple, Revolving

NEW INFINITY-CORRECTED FLAT FIELD ACHROMATIC OBJECTIVES: 10X, 20X, 45X, 100X

CONDENSERS: Dark Field Condenser in centerable mount with funnel stop for 100X objective, also N.A. 1.25 Abbe Condenser in fixed mount with iris

SUBSTAGE EQUIPMENT: Built-in Base Illuminator and Transformer

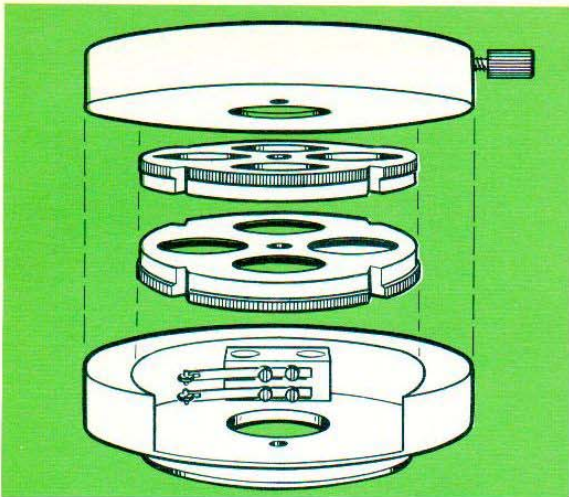
EYEPIECES: 10X Wide Field, Pair

Price **\$1,142.00**



Above Model L10TU-FDW with **FLUOROLUME** 645 and Height Adapter 636 complete..... **\$1,936.00**

Cabinets for above outfits are available at extra charge.



Double Turret Barrier Filter Assembly

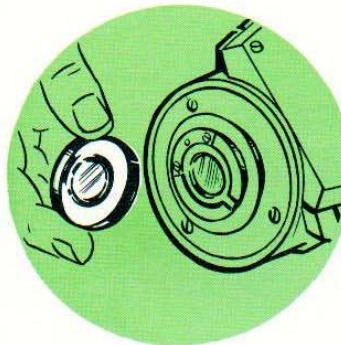
FLUORESTARS L10MU-FDW, L10BU-FDW and L10TU-FDW include a Double Turret Filter Assembly which deserves special mention. No. 1110 is supplied with three of the most commonly used Barrier Filters: Schott OG1, EK2A and Schott GG9. These three filters are mounted in the lower rotatable disc which is indexed for easy positioning of the desired filter . . . a fourth position "O" is rotated quickly into the light path when filters are not needed, such as for conventional bright field or dark field microscopy.

Other barrier filters having diameters of 18.6 or 20.6 mm may be inserted into the upper rotatable disc for use individually or in combination with barrier filters of the lower deck.

No special tools are needed to install or remove No. 1110 Turret from the FLUORESTAR . . . nor is it necessary to disassemble the turret for insertion or removal of filters.

Alternate Parts and Accessories

Catalog Number	Description	Price
176	10X Wide Field Eyepiece	\$ 21.00
1176	10X Wide Field Eyepieces, Pair	42.00
1026	50X Infinity-Corrected Oil Immersion Objective with Iris Diaphragm	130.00
1027	100X Infinity-Corrected Oil Immersion Objective with Iris Diaphragm	152.00
1079	100X Infinity-Corrected Oil Immersion Objective (Supplied as standard with FLUORESTAR)	84.50
1074	Quadruple Nosepiece	31.50
1105	Quintuple Nosepiece	43.00
1041	Inclined Monocular Body "M"	27.00
1042A	Inclined Binocular Body "B"	291.00
1043A	Inclined Trinocular Body "T"	334.00
1063	Ungraduated Mechanical Stage "U"	124.50
1065	Graduated Mechanical Stage "G"	146.00
214F	Dark Field Condenser	91.00
636	Height Adapter, 3/4" high, required for use with Series 10 and No. 645 Fluorolume Illuminator	19.00
1110	Double Turret Barrier Filter Assembly. Includes one each Barrier Filters OG1, EK2A, GG9	76.00



THE FOLLOWING INDIVIDUALLY MOUNTED BARRIER FILTERS ARE DESIGNED FOR ADAPTATION BENEATH MONOCULAR, BINOCULAR OR TRINOCULAR BODY OF SERIES 10 MICROSTAR (MAY BE SUBSTITUTED FOR #1110 TURRET)

1106 Barrier Filter (EK2A) 20.6 mm diam. in adapter mount. Colorless . . . transmits fluorescence of all colors \$ 6.50

1108 Barrier Filter (EK15) 20.6 mm diam. in adapter mount. Orange color. Recommended for use with #695 Exciter Filter (see page 5). 6.50

1123 Barrier Filter (Schott GG9) 20mm diam. in adapter mount. Light yellow-green color. 6.50

1124 Barrier Filter (Schott OG1) 20mm. diam. in adapter mount. Orange color. 6.50

636 Height Adapter, 3/4" high for use with Series 10 MICROSTAR 19.00



THE FOLLOWING INDIVIDUALLY MOUNTED BARRIER FILTERS ARE DESIGNED FOR ADAPTATION BENEATH MONOCULAR, BINOCULAR OR TRINOCULAR BODY OF SERIES 2, 4, 12, 14, 16 MICROSTAR (#1110 TURRET NOT ADAPTABLE)

706 Barrier Filter (EK2A) 20mm diam. in adapter mount. Colorless . . . transmits fluorescence of all colors \$ 6.50

708 Barrier Filter (EK15) 20.6 mm diam. in adapter mount. Orange color. Recommended for use with 695 Exciter Filter, for Acridin Orange, Auramine and related fluorescence microscopy using bright field condensers 6.50

723 Barrier Filter (Schott GG9) 20mm diam. in adapter mount. Light yellow-green 6.50

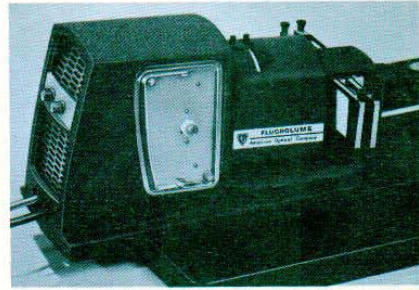
724 Barrier Filter (Schott OG1) 20mm diam. in adapter mount. Orange 6.50

646 Height Adapter, 1" high, required for use with Series 2, 12, MICROSTAR and FLUORESTAR 17.00

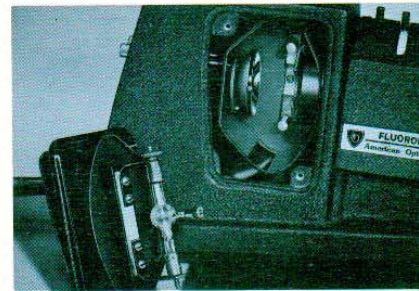
New Efficiency and Convenience
for Fluorescence Microscopy
with the

AO FLUOROLUME

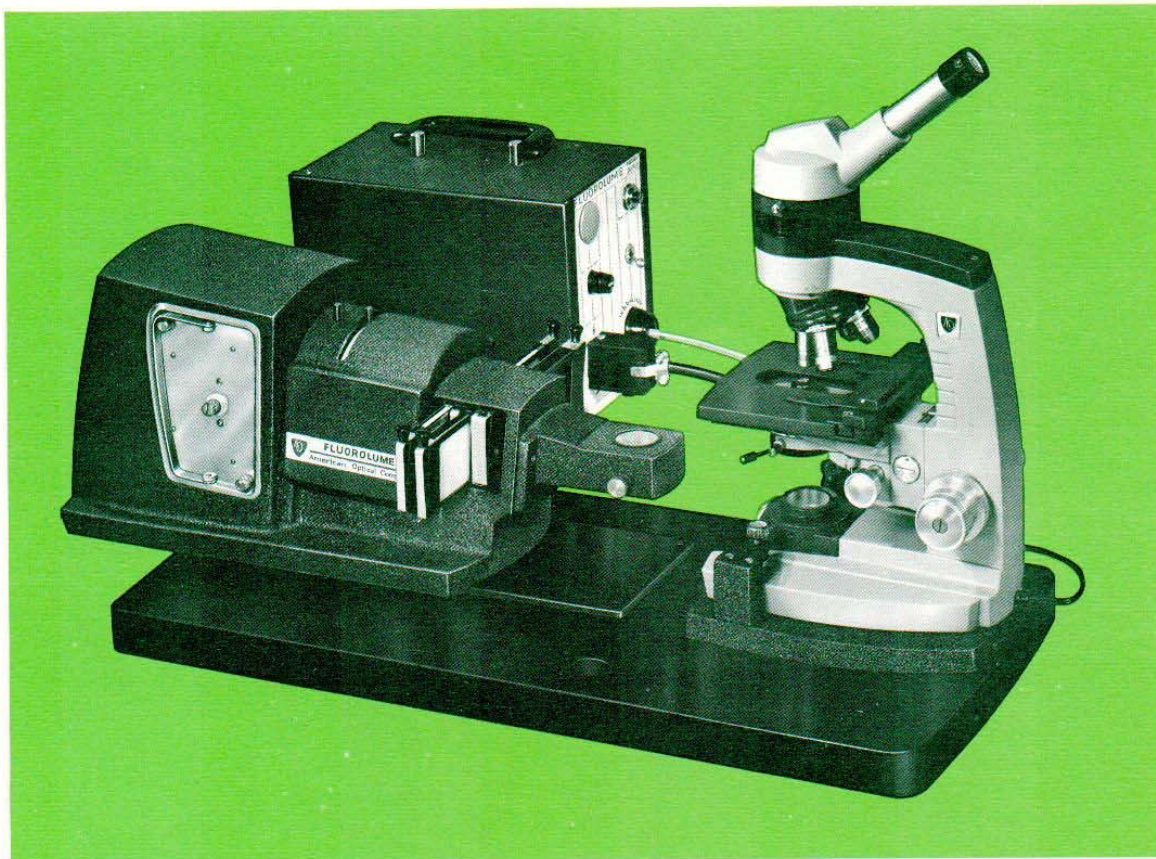
Model 645



1.

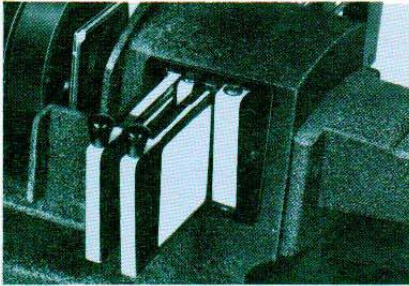


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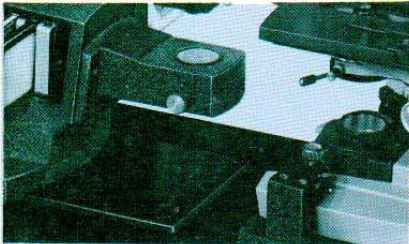




3.



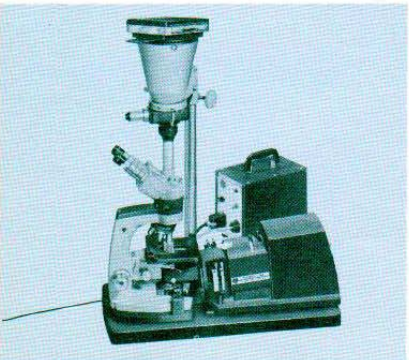
4. 5.



6.



7.



8.

1. Light-Tight Housing:

Fan-cooled, cast-aluminum housing, eliminates all stray visible light and harmful UV radiation. Light path is completely enclosed from light source to microscope. You are assured of complete safety and full image contrast at all times.

2. Easy Lamp Adjustment and Replacement:

Convenient external adjustments permit unprecedented ease in centering lamp and reflector. Door mounted lamp allows quick replacement.

3. Maximum Light Intensity:

200 watt Mercury Arc Lamp coupled with reflector and high-speed glass condenser assures maximum concentration and transmission of light intensity. The focusable condensing system and field iris diaphragm also permit ideal Koehler illumination. Unique compartment with removable cover readily accepts 75mm x 75mm x 3mm heat-absorbing filter which is supplied with basic FLUOROLUME Model 645. Alternate filters or liquid cell may also be inserted if desired.

4. Convenient Filter Change:

Four slide carriers allow rapid interchange of 50mm square or round filters. Recommended exciter filters are supplied as standard equipment, together with opal glass for white light bright field observation and metal light excluder to minimize fading of fluorescent specimen.

5. Rapid Comparison:

A special white light dark field filter is also supplied. You can make instant comparisons between fluorescence dark field and white light dark field by alternately changing from this filter to the exciter filter mounted in opposite sides of the same filter holder slide.

6. Easy Illumination Change:

Illuminator rides on polished track . . . slides back to permit use of tungsten lamp of In-Base microscope illuminator . . . moves forward to positive stop and in perfect alignment for mercury arc illumination. This retractable feature also facilitates changing and cleaning the microscope condenser.

7. Simple Orientation:

Two external adjustment knobs, one on each side of mirror housing, are within easy reach for precise orientation of mirror to microscope. This adjustment is required only once . . . spring-loaded mirror will hold position.

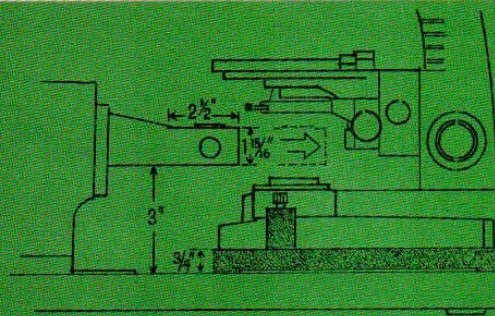
8. Versatile Fluorescence Photomicrography:

Sturdy base of Model 645 accepts upright post of AO Series 682 Photomicrographic Camera which allows a wide choice of accessory backs. Model 682G Camera is particularly well suited for fluorescence photomicrography because of the availability of high speed Polaroid films which reduce the length of UV exposure through the specimen thereby extending the fluorescent life of the specimen.



Compact Power Supply

Reactance transformer and other power-pack components are engineered for long life and complete reliability. Convenient toggle switch, located under easy-access cap, allows specific voltage selection for use of either L1 or L2 type bulb. Push-button re-start switch assures quick reliable starts, even when lamp is still hot. This portable, fused power unit operates on 110-120 volt, 60 cycle AC current . . . includes 3-wire conductor with a built-in ground wire.



Height Adapter Plate



Model 645 FLUOROLUME accommodates AO Microstars equipped with In-Base microscope illuminator . . . a Height Adapter Plate is available for AO Microstars and similar microscopes, both AO and competitive.

BASIC PACKAGE

AO FLUOROLUME Model 645 Illuminator consists of:

200 watt mercury arc lamp; compact power supply for 115 volt, 60 cycle AC; accessory case with three exciter filters (Nos. 693, 695, 702); one heat-absorbing glass (No. 713); opal glass, white light dark field filter and aperture plate; metal light excluding slide; very low fluorescent immersion oil (Cargille's Type A) one ounce.

Complete \$775.00

Please Note: Basic Package does not include Height Adapter. Select from bottom of page 5.

Filters — Exciter, Heat Absorbing and Neutral Density for AO Spencer FLUOROLUME Model 645

Catalog Number	Description	Price	Catalog Number	Description	Price
693*	Exciter Filter (Corning No. 5840) 2mm thick	\$ 6.50	702*	Exciter Filter (Schott No. BG-12) 3mm thick	\$ 8.50
649	200 watt Mercury Vapor Arc Lamp	50.00	713*	Heat Absorbing Glass 75mm square, 3mm thick (must be used if liquid filter or water filled cell is not used)	7.00
694	Exciter Filter (Corning No. 5850) 4mm thick	6.50	730	Neutral Density Set (3) with Corning daylight glass, in case	42.00
695*	Exciter Filter (Corning No. 5113) 2mm thick	6.50	743	Neutral Density Filter 75mm square. Transmission 50%	7.50
696	Exciter Filter (Corning No. 5840) 4mm thick	6.50	744	Neutral Density Filter 75mm square. Transmission 25%	7.50
697	Exciter Filter (Corning No. 5030) 4mm thick	6.50	745	Neutral Density Filter 75mm square. Transmission 5%	15.00
698	Exciter Filter (Corning No. 5860) 2mm thick	6.50	6149*	Very Low Fluorescent Immersion Oil (Cargille's type A) 1 oz.	1.15
699	Exciter Filter (Corning No. 5860) 4mm thick	6.50			
701	Exciter Filter (Corning No. 5970) 3mm thick	6.50			

* Supplied with Model 645 FLUOROLUME Illuminator. See listing of Barrier Filters for MICROSTARS, page 5.

The equipment supplied may not agree in all details with the description or illustrations shown, as instruments are subject to modification and improvement.