

# BINOCULAR MICROSCOPES

*Greenough type.*



TO  
GREATER VISION THROUGH  
OPTICAL SCIENCE

BAUSCH  
& LOMB

*William A. Sokol*

BAUSCH & LOMB





## EXPLORING NEW FIELDS

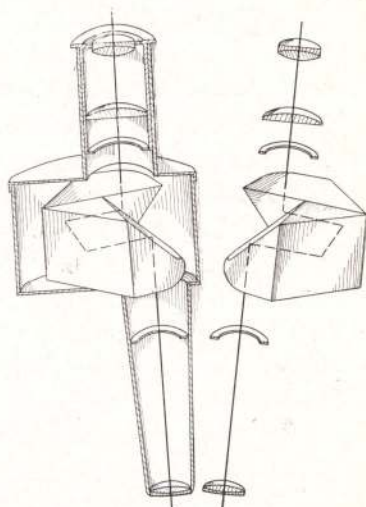
THE Binocular Microscope, in general, offers the very great advantage over the Monocular Microscope of less fatigue for the observer and the superior satisfaction always given by binocular vision as compared to monocular vision. In addition, the double microscope of the Greenough type gives stereoscopic vision, which in most cases reveals much more information as to the structure of the object than can be obtained with monocular vision, for which stereoscopy is impossible.

Industrial Laboratories especially have adapted the Binocular Microscope to a very great number of uses. The examination of surface structure, breaks and cracks, rust and finishes can all be done right in the factory with this microscope. It is simply a matter of removing the glass stage and setting the microscope right on the work. Police Laboratories are using this instrument for minute examination of such things as tire tracks (plaster castings), questioned documents and literally hundreds of other bits of evidence.

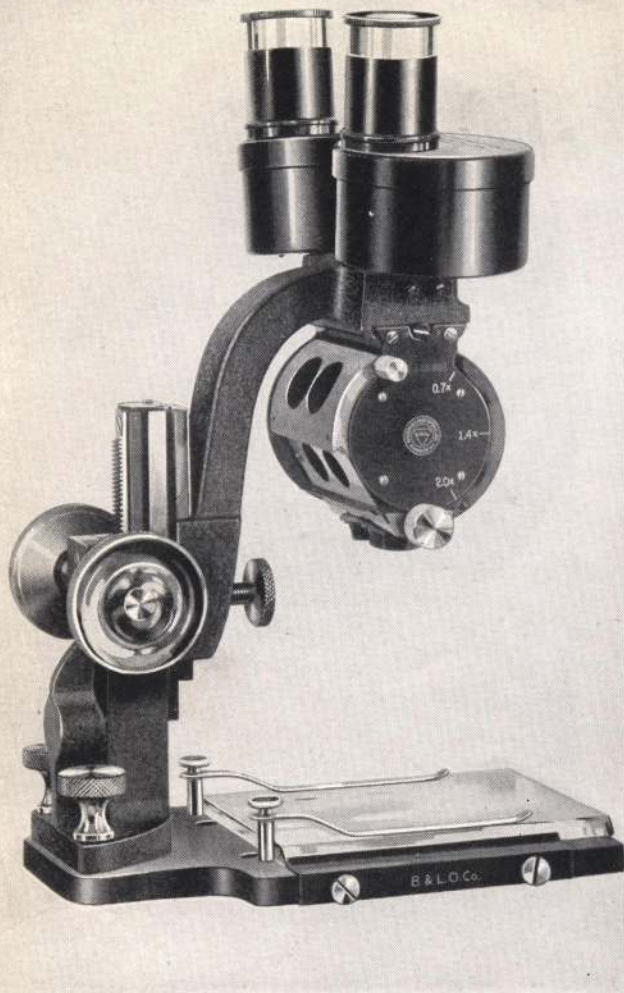
In Educational Laboratories, dissection is only one of the uses of this instrument; practically every kind of laboratory, as well as the vocational division, finds that it needs this versatile microscope. In Medical Laboratories, too, the applications of this instrument are many. For

instance, it furnishes a most excellent means of direct examination of the skin.

The ease with which this instrument can be mounted on different types of holders is one of the reasons for its popularity. Throughout the following pages you will find binocular microscopes mounted on a variety of stands to meet the requirements of all ordinary purposes. However, if you have some examination problem which the Binocular Microscope would solve and if none of the stands shown herein meet your needs, please write to us and let us know your requirements. We are in a position to develop special stands at your request.



*Arrangement of Lenses and Prisms  
in KW Model Binocular Microscope*



## THE KW WIDE FIELD BINOCULAR MICROSCOPE WITH DRUM NOSEPIECE

The most distinctive characteristics of the KW are as follows:

- 1—Extremely Wide Field
- 2—Long Working Distance
- 3—High Eye Point
- 4—Stereoscopic Vision
- 5—The Image is *not* Inverted nor Reversed
- 6—Instantaneously Variable Magnification with Parfocal Objectives.

**T**HE KW Wide-Field Binocular Microscope is one of the most valuable "all around" microscopes ever produced. Its uses are practically unlimited. In the bacteriological laboratory it will be found useful for colony counting. The skin specialist will find it ideal as a dermatoscope for differentiating between certain pathological conditions of the skin. The working distance is so long that the biologist can do dissecting work under it. Many branches of industry will find it incomparable for making inspections

and for the examination of raw materials.

### The Wide Field

The unusually wide field will be readily appreciated if you will examine the table on page 10. Observe that the real field for the KW in the higher powers is very much larger than that of the other binocular types, while in the lower magnifications it is more than double. This feature is of inestimable value and enables this instrument to be used for many purposes for which an ordinary microscope is useless.



## Long Working Distance

The long working distance in all powers permits full advantage to be taken of the extreme range of adjustments offered in the various stands. Also it allows ample room for manipulating large specimens or petri dishes and for dissecting.

## High Eye Point

The high eye point is a feature of great value because it permits the entire field to be viewed simultaneously. It is of value to those who wear glasses because their glasses need not be removed when using the instrument.

## Stereoscopic Effect

The decided stereoscopic effect obtained as the result of the double point of view is a real advantage in such work as dissecting, where the perception of three dimensions is quite necessary. This feature also proves its worth in the examination of textiles and raw materials of many kinds.

When one looks through the KW the object is seen as it really is, right side up and not *inverted nor reversed*. This is the feature which makes this

microscope a really invaluable instrument for dissecting. All movements of the dissecting instruments are performed naturally, so that there is no danger of ruining specimens through confusion as to which way to move the instruments.

## Drum Nosepiece

The convenient and compact drum nosepiece on the Bausch & Lomb Wide Field Binocular Microscope is an exclusive feature. It holds three pairs of parfocal objectives in readiness to be swung instantly into place. Without a doubt this is the greatest single advancement since the introduction of the Binocular Microscope.

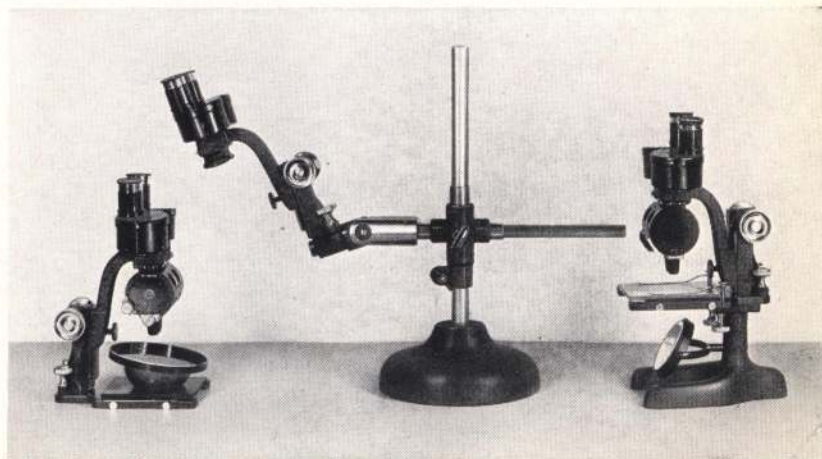
The drum nosepiece is a patented feature which was developed and recently improved after years of experimentation. It will be found as necessary to this type of microscope as the revolving nosepiece is to the mon-objective instrument.

But not only these three pairs of objectives are available. All together six separate pairs of objectives can be used with this drum nosepiece. Only the low power  $0.7\times$  objective is permanently mounted. The others,  $0.39\times$ ,  $1.5\times$ ,  $2.0\times$ ,  $4\times$ ,

*Left: Microscope AKW with Petri Dish Holder.*

*Center: Microscope SKW showing stand.*

*Right: Microscope BKW.*



and  $7.5\times$ , are instantly interchangeable. These interchangeable objectives are mounted on a beveled metal base which slides precisely and smoothly into slotted holders on the drum nosepiece. The objective mountings are fitted with a knurled knob to increase the ease of handling them. On the knob, so that it is always in plain sight, is engraved the initial magnifying power of that pair of objectives.

The AKW type of wide field binocular microscope can be purchased with or without the drum nosepiece. The drum nosepiece can be added at any time. These instruments can also be purchased with the drum nosepiece and only the permanently mounted  $0.7\times$  objective, and later, step by step, the other pairs of objectives added to the equipment.

The drum nosepiece is supplied only with the No. 5 equipments listed in the price table. It can be purchased separately with the three pairs of objectives mounted in it. This is perfectly feasible, as the nosepiece simply slips on to the microscope in the same manner as the mounted pairs of objectives.

The eyepieces are necessarily of high optical correction so as to secure at the same time a wider angle of view, high eyepoint and proper definition over the entire field.

## The Stands

The range of usefulness of the KW in the examination of all kinds of specimens under comparatively low magnifications is almost unlimited. This adaptability is made possible by

the fact that the KW body can be attached to several different stands, described below.

A lamp has been especially designed for this microscope which illuminates the specimen from above. This lamp is described fully on page 13.

### Stand A

Stand A, as illustrated on page 4, may be placed directly upon the specimen where desired, so that different parts of large objects may be observed. A clear glass stage  $100 \times 100$  mm is supplied with the AKW for use with smaller specimens. A metal stage plate upon which is mounted a petri dish holder, adjustable on the ball and socket principle, may be substituted for the regular stage of the AKW.

### Stand B

When the KW is used with the horseshoe base stand B, the large mirror, 60mm in diameter, (Plano with white diffusing surface on the reverse side) supplies illumination for transparent objects. Stand B is equipped with hand rests not shown in illustration. Microscope BKW is AKW on stand B.

### Stand S

The S Stand consists of a heavy cast iron base with a vertical post, on which is mounted a clamp to hold a horizontal bar. The pillar of the



microscope is attached to this bar by means of a sleeve and wing nut. By this arrangement the microscope may be raised or lowered vertically, or revolved about a vertical axis, or even revolved about the horizontal axis to obtain good vision in planes

not parallel with the working table. This stand was designed by Dr. G. Carl Huber, of the University of Michigan, especially for work in anatomical laboratories. It is also useful for geological and metallurgical work.

New Cat. No.	Old Cat. No.	Specifications
31-26-75-02	AKW-1	<i>Equipment No. 1</i> includes one pair eyepieces (10 $\times$ ) and one set of paired objectives (0.7 $\times$ ), magnification 7 diameters. (No nosepiece). Case included.
31-26-75-12	BKW-1	
31-26-76-02	SKW-1	<i>Equipment No. 4</i> includes two pairs eyepieces (10 $\times$ and 15 $\times$ ) and three sets of paired objectives (0.7 $\times$ , 1.5 $\times$ , 2.0 $\times$ ), giving a range of magnification 7 to 30 diameters. (No nosepiece.) Case included.
31-26-75-04	AKW-4	
31-26-75-14	BKW-4	<i>Equipment No. 5</i> is the same as No. 4 except that the three sets of paired objectives are mounted for use in the new Drum Nosepiece. (See No. 31-12-82-01.) Case.
31-26-76-04	SKW-4	
31-26-75-25	AKW-5	<i>Paired Objectives</i> 0.39 $\times$ , for use only without nosepiece.
31-26-75-35	BKW-5	
31-26-76-25	SKW-5	† <i>Paired Objectives</i> 0.7 $\times$ , for use without nosepiece.
31-12-61		
31-12-62	1062	† <i>Paired Objectives</i> 1.5 $\times$ , for use without nosepiece.
31-12-64	1064	† <i>Paired Objectives</i> 2.0 $\times$ , for use without nosepiece.
31-12-66	1066	* <i>Paired Objectives</i> 1.5 $\times$ , for use with drum nosepiece.
31-12-84	1084	* <i>Paired Objectives</i> 2.0 $\times$ , for use with drum nosepiece.
31-12-85	1085	* <i>Paired Objectives</i> 4.0 $\times$ , for use with drum nosepiece.
31-12-89		* <i>Paired Objectives</i> 7.5 $\times$ , for use with drum nosepiece.
31-12-90		For higher power objectives see list on page 12.
31-12-82-01	1082	<i>Drum Nosepiece</i> with one pair objectives (0.7 $\times$ ) built-in with places for two more.
31-15-54-02	1154	<i>Paired Eyepieces</i> 10 $\times$ .
31-15-58-02	1158	<i>Paired Eyepieces</i> 15 $\times$ .
31-15-60-02		<i>Paired Eyepieces</i> 20 $\times$ .
31-26-75-01	KW	<i>Stand only.</i>
31-50-40	B	<i>Stand with Hand Rests</i> only, no case.
31-50-41	S	<i>Stand only</i> , no case, Huber Model.
31-59-18		<i>Petri Dish Stage</i>

See Magnification Table on page 10.

†These paired objectives are for use on microscopes not equipped with drum nosepiece and do not require objective adapters.

\*If these objectives are to be used on a KW Microscope without drum nosepiece, please specify objective adapter No. 31-50-48.



# **THE B K T WIDE FIELD BINOCULAR MICRO- SCOPE WITH INCLINED EYEPieces FOR COMFORT**

**T**HIS new model of the Bausch & Lomb Wide Field Binocular Microscope has, in addition to the several other advantages, two features of special importance: inclined eyepieces and a built-on drum nose-piece.

## **The Inclined Eyepieces**

The Binocular Body Tubes are tilted at an angle which allows the microscopist to sit comfortably at the instrument without strain of neck and shoulder muscles. The observer is leaning easily forward from

the hips while the head and neck are in practically a normal position. This freedom from strain, and consequently from a measure of fatigue, adds greatly to the observer's efficiency. The movement of only one body tube is necessary to adjust for interpupillary distance of the eyepieces, as both prism systems are precisely set, making synchronous rotation unnecessary.

## **The Drum Nosepiece**

The BKT is equipped with a revolving drum nosepiece, which is



built in. Seven pairs of objectives are offered with this microscope; six of them are changeable and one pair, the  $0.7\times$ , is built into the drum. The revolving drum will hold three pairs of objectives at one time.

## The Base

The base of this microscope is heavy cast iron well proportioned in size and height to accommodate the microscope which it supports. The substage mirror is attached to and is a part of the base. For the examination of objects too large to go on the stage, the microscope can be easily removed from the base by removing the two thumb screws under the stage.

## The Stage

The glass stage,  $100 \times 100$  mm, is large enough to make possible an easy manipulation of gross specimens such as are usually examined with the Wide Field type of microscope. A white metal plate is furnished and may be slipped under the glass stage when opaque objects are being examined.

## Focusing

The focusing mechanism is a diagonally cut rack and pinion, precisely machined to give positive movement. This should remain accurate during the life of the instrument.

## Optical Features

Particular attention is called to the eyepieces. They have a comfortably large aperture and are flat, allowing the use of the camera lucida. The image is not inverted or reversed and the field is unusually large. A high eye point and long working distance are other most desirable features.

## Construction

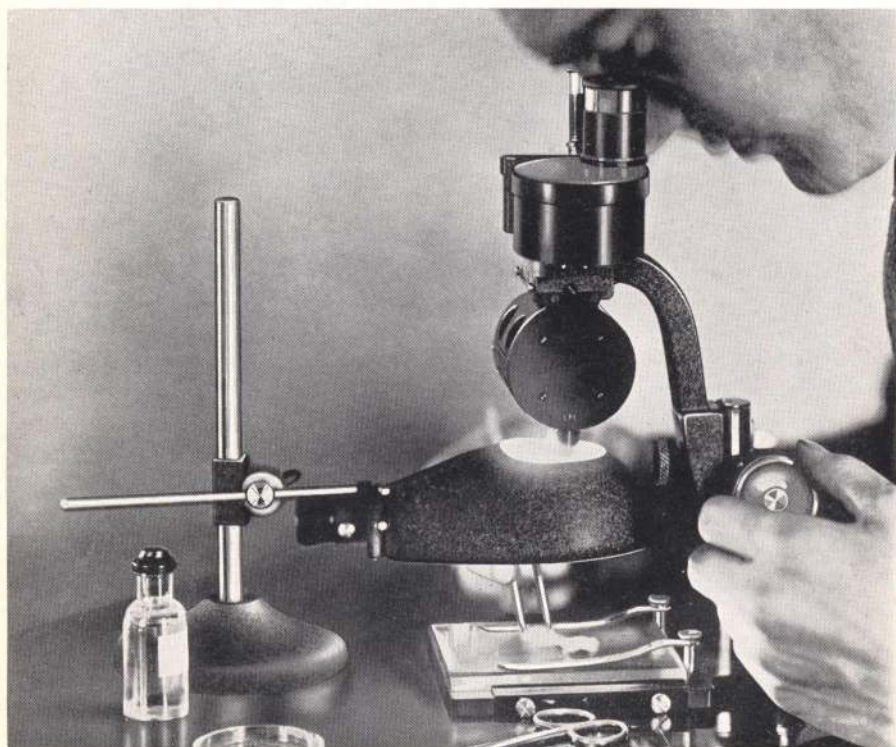
The BKT is sturdily constructed to protect its inherent precision against the hard usage it will sometimes receive. Its design is simple and well balanced.

New Cat. No.	Old Cat. No.	Specifications
31-26-81-31	BKT-1	<i>BKT Microscope</i> with one pair of eyepieces ( $10\times$ ) and $0.7\times$ objectives built into drum nosepiece. Magnification 7 diameters.
31-26-81-35	BKT-5	<i>BKT Microscope</i> with two pairs of eyepieces ( $10\times$ , $15\times$ ) and $0.7\times$ , $1.5\times$ and $2.0\times$ objectives in drum nosepiece. Magnifications from $7\times$ to $30\times$ .
31-12-84	1084	<i>Paired Objectives</i> , $1.5\times$ , for drum nosepiece.
31-12-85	1085	<i>Paired Objectives</i> , $2.0\times$ , for drum nosepiece.
31-12-89		<i>Paired Objectives</i> , $4.0\times$ , for drum nosepiece.
31-12-90		<i>Paired Objectives</i> , $7.5\times$ , for drum nosepiece.
31-50-40	B	<i>Base</i> with Hand Rests only, no case.
31-59-18		<i>Petri Dish Stage</i>

See Magnification Table on page 10.

## Magnifications and Real Fields for KW

Paired Eyepiece Mag. No.	Objective Magnification Number					
	0.39	0.7	1.5	2.0	4	7.5
10	$3.9 \times$ 46.0 mm	$7.0 \times$ 25.4 mm	$15 \times$ 11.9 mm	$20 \times$ 9.0 mm	$40 \times$ 4.45 mm	$75 \times$ 2.38 mm
15	$5.9 \times$ 40.0 mm	$10.5 \times$ 21.5 mm	$22.5 \times$ 10.2 mm	$30 \times$ 8.0 mm	$60 \times$ 3.82 mm	$112.5 \times$ 2.04 mm
20	$7.8 \times$ 25.0 mm	$14 \times$ 16.60 mm	$30 \times$ 7.80 mm	$40 \times$ 5.85 mm	$80 \times$ 2.92 mm	$150 \times$ 1.56 mm



*The KW Microscope in Use*



# EYEPieces

**E**ACH Bausch & Lomb Eyepiece is engraved with its magnification value. This value is computed by dividing 250mm (distance of distinct vision) by the equivalent focal length of the eyepiece. The number indicates the power of the eyepiece when

used as a magnifier. When multiplied by the magnification number of the objective with which it is used, it gives the total magnification of the combination. All eyepieces are 23 mm in diameter to fit any standard eyepiece tube.

## Paired Eyepieces for KW Types

The wide field eyepieces are positive eyepieces. They have exceptionally large fields as well as a high

eye point. Each eyepiece is marked according to its magnification when used as a simple magnifier.

New Catalog No.	Old Catalog No.	Mag. No.	E. F. in mm
31-15-54-02	1154	10	25
31-15-58-02	1158	15	16.6
31-15-60-02		20	12.5

## Paired Huygenian Eyepieces for KA Types

Pairs of eyepieces specially selected for equality of magnifying power, location of focal plane, and size of field are listed below for the earlier KA types.

They are all made parfocal so that in interchanging them only a slight change in the adjustment is necessary.

New Catalog No.	Old Catalog No.	Mag. No.	E. F. in mm
31-15-05-02	1110	5.0	50
31-15-06-02	1111	6.4	40
31-15-07-02	1112	7.5	33
31-15-10-02	1114	10.0	25
31-15-12-02	1116	12.5	20

# OBJECTIVES

## Paired Objectives for KW Types

Paired objectives for the KW Microscopes have practically the same optical characteristics as those for the KA types. All are not interchangeable, however, because of a

variation in the mounting. Four pairs of objectives may be had mounted in the drum nosepiece, and the other four purchased to interchange. See page 7.

## Objectives for Use Without Drum Nosepiece

New Catalog No.	Old Catalog No.	Mag. No.	Working Distance
31-12-61		0.39	112 mm
31-12-62	1062	0.7	135 mm
31-12-64	1064	1.5	98 mm
31-12-66	1066	2.0	81 mm

## Objectives for Use With Drum Nosepiece or Objective Adapter

New Catalog No.	Old Catalog No.	Mag. No.	Working Distance
31-12-84*	1084	1.5	98 mm
31-12-85*	1085	2.0	81 mm
31-12-89*		4.0	48 mm
31-12-90*		7.5	27 mm

\*These objectives may be used either with microscopes fitted with drum nosepiece or an objective adapter. When ordering for use on a stands without drum nosepiece, specify Objective Adapter No. 31-50-48.

## Paired Objectives for KA Types

For the earlier KA Greenough Binocular Microscope we furnish five pairs of objectives mounted on slides.

Each pair of objectives is centerable in an unusually substantial base made one-piece with the slide, and may be interchanged without disturbing the centering. The size of the centering screws assures stability,

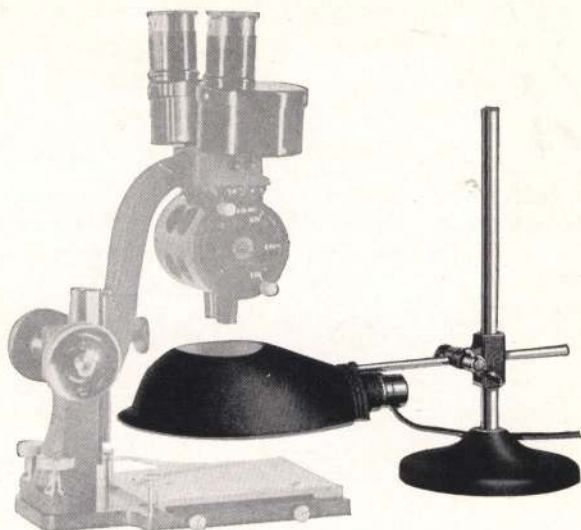
once the objectives are properly centered, as they will be found to be upon receipt from our factory. In the higher powers one objective of each pair has a focusing collar which permits compensation for any difference in vision of the eyes of the individual. All objectives are achromatic of our standard quality.

New Catalog No.	Old Catalog No.	Equivalent Focus in mm	Working Distance
31-12-46	1046	55	70 mm
31-12-48	1048	48	53 mm
31-12-50	1050	40	49 mm
31-12-52*	1052*	32	37 mm
31-12-54*	1054*	24	26 mm

\*With compensating collars for independent focusing of one of the objectives.



## WIDE FIELD LAMP



**T**HIS lamp is the first of its kind for complete illumination of opaque objects upon the stage of a low power binocular microscope. Even though the specimen be deep and cup-like with many irregularities, this lamp, by means of its ellipsoidal reflecting surfaces, throws light into every corner and recess, eliminating all shadows.

The Wide Field Lamp illuminates a very large field, but because of the shape of its reflector the light is all concentrated upon the stage of the microscope and no annoying reflections strike the eyes. Enough light

is thrown out at the sides to illuminate a note pad or drawing paper beside the instrument in a dark or semi-darkened room.

This lamp consists of a heavy base and vertical rod upon which the lamp can be adjusted for height. The reflector is pear-shaped with a circular hole at the top through which the specimen is viewed. The light is reflected at all angles into the field of observation.

The lamp is equipped with a 15 watt, 110-115 volt bulb for use on an ordinary house circuit, either A.C. or D.C.

Catalog No.	Specifications
31-33-23-11 31-31-20	<i>Wide-Field Lamp</i> with stand and 15 watt, 115 volt bulb. <i>Bulb</i> 15 watt, 115 volt M. C. P.

# TERMS

When ordering from this catalog, please give catalog number, name of article and size. Use code words in telegraphing.

**CREDIT AND FINANCIAL STANDING**—To avoid delay, purchasers with whom we have no account should accompany their first order with remittance in cash, or commercial references. Orders can now be sent by telegraph between points in the United States, in the same message with remittance.

**SHIPMENTS**—No C. O. D. shipments will be made unless sufficient funds to cover delivery charges both ways accompany the orders. Goods to be sent on memorandum account will not be forwarded C. O. D. Goods will not be made on special order to be forwarded C. O. D.

Transportation for goods sent on memorandum or for examination is at the expense of the customer.

**LIABILITY**—In packing we double check all goods, and obtain proper receipts from the transportation companies. Unless otherwise specified, goods are shipped f. o. b. destination and we shall use our best judgment in mode of shipping, prepaying transportation if requested and adding amount to invoice. Our responsibility ceases when f. o. b. Rochester shipments are delivered to the carriers. All claims for breakage should be reported to the transportation companies at once, as we cannot be held responsible for losses or damage to goods in transit. Please examine all packing minutely for small items.

We exercise the utmost care in manufacturing and packing. In case of faulty goods inadvertently reaching our customers, we shall feel under obligation if our attention is called thereto.

**RETURNING OF GOODS**—Goods being returned for any reason should be plainly tagged with the sender's name and address. Special identification tags are furnished on request. Wherever possible, please give date of invoice on which the goods were originally billed.

**NOTICE**—Prices in this catalog are subject to change without notice.

BAUSCH & LOMB OPTICAL CO.



# PRICE LIST

## FOR

### BINOCULAR MICROSCOPES

#### CATALOG D-15

January 2, 1936

Page No.	Code Word	Catalog No.	Description	Price
7	<i>Aduhb</i>	31-26-75-02	Microscope AKW-1.....	\$111.50
7	<i>Adujc</i>	31-26-75-12	Microscope BKW-1.....	127.50
7	<i>Adulf</i>	31-26-76-02	Microscope SKW-1.....	126.50
7	<i>Adumg</i>	31-26-75-04	Microscope AKW-4.....	162.00
7	<i>Adunh</i>	31-26-75-14	Microscope BKW-4.....	178.00
7	<i>Adupj</i>	31-26-76-04	Microscope SKW-4.....	177.00
7	<i>Advuj</i>	31-26-75-25	Microscope AKW-5.....	182.00
7	<i>Adyum</i>	31-26-75-35	Microscope BKW-5.....	198.00
7	<i>Adwuk</i>	31-26-76-25	Microscope SKW-5.....	197.00
7	<i>Aivkl</i>	31-12-61	Paired Objectives 0.39X.....	19.00
7	<i>Adkev</i>	31-12-62	Paired Objectives 0.7X.....	19.00
7	<i>Afucz</i>	31-12-64	Paired Objectives 1.5X.....	19.00
7	<i>Afudb</i>	31-12-66	Paired Objectives 2.0X.....	19.00
7	<i>Aidby</i>	31-12-84	*Paired Objectives 1.5X.....	19.00
7	<i>Ahuvz</i>	31-12-85	*Paired Objectives 2.0X.....	19.00
7	<i>Agurs</i>	31-12-89	*Paired Objectives 4.0X.....	20.00
7	<i>Agunp</i>	31-12-90	*Paired Objectives 7.5X.....	20.00
7	<i>Ahwes</i>	31-12-82-01	Nosepiece.....	39.00
7	<i>Adlav</i>	31-15-54-02	Paired Eyepieces 10X.....	12.50
7	<i>Adlew</i>	31-15-58-02	Paired Eyepieces 15X.....	12.50
7	<i>Agupr</i>	31-15-60-02	Paired Eyepieces 20X.....	12.50
7	<i>Ahyat</i>	31-26-75-01	KW Stand.....	76.50
7	<i>Admex</i>	31-50-40	Stand B, with Hand Rests..	16.00
7	<i>Adney</i>	31-50-41	Stand S.....	27.50
7	<i>Ajcof</i>	31-59-18	Petri Dish Stage.....	17.00
9	<i>Agigf</i>	31-26-81-31	Microscope BKT-1.....	167.50
9	<i>Agihg</i>	31-26-81-35	Microscope BKT-5.....	218.00
9	<i>Aidby</i>	31-12-84	*Paired Objectives 1.5X.....	19.00
9	<i>Ahuvz</i>	31-12-85	*Paired Objectives 2.0X.....	19.00
9	<i>Agurs</i>	31-12-89	*Paired Objectives 4.0X.....	20.00
9	<i>Agunp</i>	31-12-90	*Paired Objectives 7.5X.....	20.00
9	<i>Admex</i>	31-50-40	Stand B with Hand Rests....	16.00
9	<i>Ajcof</i>	31-59-18	Petri Dish Stage.....	17.00

\*On Slide for use with Drum nosepiece.

Page No.	Code Word	Catalog No.	Description	Price
11	<i>Adlav</i>	31-15-54-02	Paired Eyepieces 10.0× . . . . .	\$12.50
11	<i>Adlew</i>	31-15-58-02	Paired Eyepieces 15.0× . . . . .	12.50
11	<i>Agupr</i>	31-15-60-02	Paired Eyepieces 20.0× . . . . .	12.50
11	<i>Abehp</i>	31-15-05-02	Paired Eyepieces 5.0× . . . . .	6.00
11	<i>Abejr</i>	31-15-06-02	Paired Eyepieces 6.4× . . . . .	6.00
11	<i>Abeks</i>	31-15-07-02	Paired Eyepieces 7.5× . . . . .	6.00
11	<i>Abelt</i>	31-15-10-02	Paired Eyepieces 10.0× . . . . .	6.00
11	<i>Abemv</i>	31-15-12-02	Paired Eyepieces 12.5× . . . . .	6.00
12	<i>Aivkl</i>	31-12-61	Paired Objectives 0.39× . . . . .	19.00
12	<i>Adkev</i>	31-12-62	Paired Objectives 0.7× . . . . .	19.00
12	<i>Afucz</i>	31-12-64	Paired Objectives 1.5× . . . . .	19.00
12	<i>Afudb</i>	31-12-66	Paired Objectives 2.0× . . . . .	19.00
12	<i>Aidby</i>	31-12-84	*Paired Objectives 1.5× . . . . .	19.00
12	<i>Ahuvz</i>	31-12-85	*Paired Objectives 2.0× . . . . .	19.00
12	<i>Agurs</i>	31-12-89	*Paired Objectives 4.0× . . . . .	20.00
12	<i>Agunp</i>	31-12-90	*Paired Objectives 7.5× . . . . .	20.00
12	<i>Abduk</i>	31-12-46	Paired Objectives 55 E.F. . . .	19.00
12	<i>Abebj</i>	31-12-48	Paired Objectives 48 E.F. . . .	19.00
12	<i>Abeck</i>	31-12-50	Paired Objectives 40 E.F. . . .	19.00
12	<i>Abedl</i>	31-12-52	Paired Objectives 32 E.F. . . .	20.00
12	<i>Abefm</i>	31-12-54	Paired Objectives 24 E.F. . . .	24.00
13	<i>Ahxas</i>	31-33-23-11	Lamp . . . . .	12.00
13	<i>Acufv</i>	31-31-20	Bulb . . . . . M.C.P.	.75

\*On Slide for use with Drum nosepiece.

M.C.P.—Manufacturer's Current Price

*The prices herein is subject to change without notice and to increase for taxes, excises or other charges imposed by governmental authorities with respect to articles listed herein or to the sale thereof.*

Bausch & Lomb Optical Co.  
Rochester, N. Y., U. S. A.



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Branch offices are maintained in New York, Chicago, and San Francisco, where sample lines of our products are carried for inspection by our customers. Our products are also supplied by dealers in the United States and Canada and by our agents in foreign countries.

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