

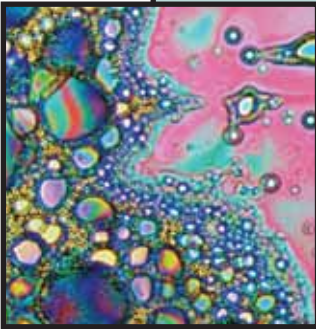
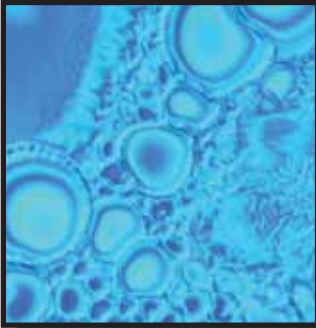
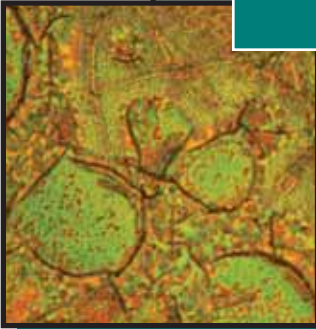
## VWR<sup>™</sup> VistaVision<sup>™</sup> Microscopes

**The Focus  
Is On  
Selection**



*Research and Education Compound Microscopes*

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*Microscope with Dual Incandescent Light, 43300-506*



**Numerous options  
increase your  
versatility**

These Stereo microscopes, designed for use in quality inspection, classroom education and a number of other applications, have a working distance of 82mm. Binocular viewing head with single diopter adjustment rotates 360°. The rack and pinion focusing with tension control adjustment provides fluid, precise control, while the slip-clutch mechanism prevents gear damage. Illumination is provided by a dual incandescent light or halogen (upper)/fluorescent (lower) light combination. The frosted glass stage plate in the base provides evenly diffused illumination. Dual magnification is offered in all six models.

**VWR™  
VistaVision™  
Stereo  
Microscopes**

**Encourage  
Scientific  
Discoveries**



*Microscope with Incandescent/Fluorescent Light, 43300-512*

**Stereo Microscopes**

| Model No.   | Magnification | Cat. No.  | Each     |
|---|---------------|-----------|----------|
| <b>Microscope with Dual Incandescent Light</b>                    |               |           |          |
| DI-12   | 1x/2x         | 43300-504 | \$589.00 |
| DI-13   | 1x/3x         | 43300-506 | 589.00   |
| DI-14   | 2x/4x         | 43300-508 | 589.00   |
| <b>Microscope with Incandescent/Fluorescent Light Combination</b> |               |           |          |
| HF-12   | 1x/2x         | 43300-510 | \$589.00 |
| HF-13   | 1x/3x         | 43300-512 | 589.00   |
| HF-14   | 2x/4x         | 43300-514 | 589.00   |

# VWR™ VistaVision™ Stereo Microscopes

Remarkably Clear  
Images and  
Depth of Field



12778-128

## Easy-to-use microscopes for many applications

VWR VistaVision Stereo-Zoom microscopes are sophisticated scientific tools created for ease-of-use and tight budgets. Designed with ergonomics in mind, the side-mounted zoom controls, low positioned focus control,



12778-122

and a wide interpupillary adjustment range take the strain out of routine microscopic examinations. The crystal clear resolved image puts the enjoyment of discovery into microscopy.

These microscopes are ideally suited for industrial inspection, botanical or biological dissection, and mineralogical evaluation. Accentuating the exceptional value is the remarkably clear, non-distorted 3D image throughout the zoom range. The optical design provides exceptional depth of field, allowing inspection of crevices and elevated elements at the same time. Precision optics deliver crisp, flat images that display brilliant contrast, helping facilitate every analysis.

StereoZoom microscopes have an innovative lighting system, allowing observation of dense or transparent samples. Choose between reflected or transmitted light, or both, and vary the intensity for bright illumination with sharp contrast. The fluorescent transmitted light model allows cool illumination for heat-sensitive samples.

Large samples are easily accommodated on the microscope's large stage and its 100mm working distance quickly brings the sample into focus. The durable focus mechanism with unique tension adjustment helps maintain focus even in tough environments, such as fabrication areas and classrooms.

### StereoZoom Models

| Stand  | Head       | Illumination        | Cat. No.  | Each      |
|--|------------|---------------------|-----------|-----------|
| <b>Zoom Magnification Range 0.75x – 3.4x</b>     |            |                     |           |           |
| Illuminated                                      | Binocular  | Halogen/Fluorescent | 43300-528 | \$882.00  |
| <b>Zoom Magnification Range 0.65x – 4.5x</b>     |            |                     |           |           |
| Illuminated                                      | Binocular  | Dual Halogen        | 12778-122 | \$1425.00 |
| Illuminated                                      | Trinocular | Dual Halogen        | 12778-126 | 1945.00   |
| Illuminated                                      | Binocular  | Halogen/Fluorescent | 12778-124 | 1425.00   |
| Pole   | Binocular  | —                   | 12778-120 | 1395.00   |
| Pole   | Trinocular | —                   | 12778-132 | 1995.00   |
| Boom, Universal                                  | Binocular  | —                   | 12778-128 | 2725.00   |
| Boom, Universal                                  | Trinocular | —                   | 12778-130 | 3625.00   |
| Boom, Roller Bearing                             | Binocular  | —                   | 12778-134 | 3199.00   |
| Boom, Roller Bearing                             | Trinocular | —                   | 12778-136 | 3599.00   |
| Boom, Articulating Arm                           | Binocular  | —                   | 12778-138 | 2795.00   |
| Boom, Articulating Arm                           | Trinocular | —                   | 12778-140 | 3195.00   |
| <b>8:1 Zoom Magnification Range 0.60x – 5.0x</b> |            |                     |           |           |
| Illuminated                                      | Binocular  | Dual Halogen        | 12778-148 | \$1895.00 |
| Illuminated                                      | Binocular  | Dual Halogen        | 12778-150 | 1895.00   |
| Pole   | Binocular  | —                   | 12778-152 | 1795.00   |
| <b>OptiZoom Magnification Range 0.55x – 5.5x</b> |            |                     |           |           |
| Illuminated                                      | Binocular  | Dual Halogen        | 12778-142 | \$1250.00 |
| Illuminated                                      | Binocular  | Dual Halogen        | 12778-144 | 1250.00   |
| Pole   | Binocular  | —                   | 12778-146 | 1195.00   |

## Choose the optical design best suited for your needs

The VWR VistaVision StereoZoom microscopes provide three levels of optical design. The 8:1 zoom model delivers maximum



*Pole Stand, 12778-120*

magnification range and crisp, clear images. OptiZoom models offer defined stops along the magnification range, so when the changer clicks, your magnification is fixed. The ProZoom microscope offers similar clarity and magnification, and features a wide variety of stands to meet your needs.

The Roller Bearing Boom Stand effortlessly moves the head forward or backward to facilitate checking large or multiple parts on a bench. The Universal Boom Stand offers greater travel distance for the same purpose. The Articulating Arm adds flexibility to travel, moving in three dimensions along an x-, y-, and z-axis. Another option to increase working distance is the Pole Stand, common in metallurgical and electronics applications.



*Articulating Arm Stand, 12778-138*

## Additional light sources

Most applications for the boom and pole stands require direct illumination. The VWR VistaVision Fiber Optic light sources satisfy those needs and the optional light guides move the light from its source to the sample's location.

### Auxiliary Lenses

| Magnification | Cat. No. for Use with ProZoom |          | Cat. No. for Use with 8:1 Zoom |          | Cat. No. for Use with OptiZoom |          |
|---------------|-------------------------------|----------|--------------------------------|----------|--------------------------------|----------|
|               |                               | Each     |                                | Each     |                                | Each     |
| 0.5x          | 12778-160                     | \$225.00 | 12778-188                      | \$225.00 | 12778-174                      | \$225.00 |
| 0.75x         | 12778-162                     | 225.00   | 12778-190                      | 225.00   | 12778-176                      | 225.00   |
| 1.5x          | 12778-164                     | 225.00   | 12778-192                      | 225.00   | 12778-178                      | 225.00   |
| 2.0x          | 12778-166                     | 225.00   | 12778-194                      | 225.00   | 12778-180                      | 225.00   |

### Optional Eyepieces

| Magnification | Cat. No. for Use with ProZoom |         | Cat. No. for Use with 8:1 Zoom |         | Cat. No. for Use with OptiZoom |         |
|---------------|-------------------------------|---------|--------------------------------|---------|--------------------------------|---------|
|               |                               | Each    |                                | Each    |                                | Each    |
| 15x           | 12778-156                     | \$95.00 | 12778-184                      | \$95.00 | 12778-170                      | \$95.00 |
| 20x           | 12778-158                     | 95.00   | 12778-186                      | 95.00   | 12778-172                      | 95.00   |

### Fiber Optics

| Description                            | Cat. No.  | Each     |
|--|-----------|----------|
| 150W Fiber Optic Light Source          | 43300-740 | \$612.85 |
| 50W Fiber Optic Light Source           | 43300-714 | 350.20   |
| Single Light Guide, 6 mm x 20"         | 43300-716 | 146.35   |
| Light Guide Focusing Lens              | 43300-722 | 33.95    |
| Bifurcated Light Guide, 8 mm x 18"     | 43300-738 | 338.15   |
| Annular Ring Light, 10 mm x 30"        | 43300-718 | 442.90   |
| Annular Ring Light, 8-point Adjustable | 43300-720 | 473.80   |



*Fiber Optics, Top: 43300-740 with -716 and -722, 43300-714 with -738; Bottom: 43300-720, -718*

43300-534, -546, -532



## VWR™ VistaVision™ Research and Education Compound Microscopes

### A New Standard in Optical Quality

precision and longevity. Four function focusing, including tension control and focus stops, are standard. Stability is also a benefit for the image documentation aspects of microscopy as described in the digital imaging section in this brochure (see pages 14 and 15).



*A variety of objectives span multiple performance levels*

### High-performance instruments with user-comfort features

VWR VistaVision Research and Education microscopes are modern, high performance optical instruments ideal for solving problems in both routine and research environments. The brilliant, sharp images they produce have exceptional contrast and resolution free of chromatic aberration. They represent a new standard in optical quality seldom seen in this class of microscope.

Designed to allow natural posture when seated, VWR VistaVision Research and Education microscopes enable long hours of observation without fatigue.

The main controls are positioned at your fingertips, while your arms rest on the work surface, helping increase workflow. The quintuple-position nosepiece points toward the back, making it easy to change specimens and objectives. Their efficient, user-friendly stage with precise graduation and movement facilitates finding specimens quickly, making these microscopes ideal for lab bench work. Comfortable, easy viewing is achieved via the high eye-point eyepieces.

### Built for stability and durability

The durable, vibration-damping construction of these microscopes provides outstanding stability. Built to last, the instruments feature focus assemblies with multiple shafts and gears of stainless steel and brass for

The VWR VistaVision Research microscopes allow multiple observation techniques, including phase contrast, darkfield and polarization (see page 9). The Education microscopes (see page 10) are designed to satisfy demanding performance criteria for the classroom and laboratory without the burden of expensive accessories.



*Mechanical Stage Close-Up*

All VWR VistaVision Research and Education microscopes include a spare halogen lamp, a spare fuse, immersion oil, dust cover, and two color filters.

## Koehler Illumination design enhances visibility

Brightfield illumination is the most common method for observation and works well for many specimens that have natural absorption of visible light, including:

- Stained animal and plant tissues
- Fatty acids, anti-cancer agents, proteins, organic carbons
- Fixed and naturally colored specimens
- Polymers
- Food and dairy products, spices, flavors
- Hair, fibers, bone and more

VWR VistaVision Brightfield microscopes provide bright illumination of uniform intensity throughout the Field of View (FOV). Their Koehler Illumination design with a 1.25 N.A. Abbe condenser provides precise centering of the light path, enhancing the specimen's individual features and details. The field iris diaphragm works in conjunction with the sub-stage condenser to focus a 6V, 20W halogen light (with electronic dimmer) for optimum illumination. The iris diaphragm on the condenser can be adjusted to restrict the light cone and enhance contrast as required.

Fitted with a super widefield 10x eyepiece (F.N.20) and four Planachromatic objectives on a five-position objective turret, VWR VistaVision Brightfield microscopes deliver crisp, resolved images. The images are flat or devoid of spherical aberrations even at the perimeter of the FOV. The high-power objectives feature retractable lenses and, together with a focus stop, protect the microscope and specimen slide from damage. Facilitating observation, the large 6.3x5.5" graduated mechanical stage features a removable spring-loaded slide holder and coaxial controls. These controls provide precise adjustment of  $\pm 2\mu\text{m}$  without stage drift. Even the interpupillary and diopter adjustments improve microscopic observation by letting you correct the eyepieces for your vision.



43300-536



43300-536, 43300-550

**VWR™**  
**VistaVision™**  
**Brightfield**  
**Illumination**  
**Research**  
**Microscopes**

**Bright**  
**Illumination**  
**with Uniform**  
**Intensity**

### VWR VistaVision Brightfield Illumination Research microscopes are supplied with the following objectives:

| DIN Standard Objective             | Magnification | Numerical Aperture | Working Distance |
|------------------------------------|---------------|--------------------|------------------|
| <b>43300-534 (Binocular Head)</b>  |               |                    |                  |
| Brightfield, Planachromatic        | 4x            | 0.1                | 17 mm            |
| Brightfield, Planachromatic        | 10x           | 0.25               | 8 mm             |
| Brightfield, Planachromatic        | 40xR          | 0.65               | 0.4 mm           |
| Brightfield, Planachromatic        | 100xR oil     | 1.25               | 0.25 mm          |
| <b>43300-536 (Trinocular Head)</b> |               |                    |                  |
| Brightfield, Planachromatic        | 4x            | 0.1                | 17 mm            |
| Brightfield, Planachromatic        | 10x           | 0.25               | 8 mm             |
| Brightfield, Planachromatic        | 40xR          | 0.65               | 0.4 mm           |
| Brightfield, Planachromatic        | 100xR oil     | 1.25               | 0.25 mm          |

R = Retractable lens

| <b>Brightfield Microscopes with Four Objectives</b> |           |           |  |
|---|-----------|-----------|--|
| Description   | Cat. No.  | Each      |  |
| Binocular   | 43300-534 | \$1492.00 |  |
| Trinocular  | 43300-536 | 1768.00   |  |

# VWR™ VistaVision™ Phase Contrast Microscopes

The Best Way  
to Observe  
Poor Contrast  
Specimens



43300-538

## VWR VistaVision Phase Contrast microscopes are supplied with the following objectives:

| DIN Standard Objective  | Magnification | Numerical Aperture | Working Distance |
|---|---------------|--------------------|------------------|
| <b>43300-538 (Binocular Head with 4 Planachromatic Objectives)</b>  |               |                    |                  |
| Brightfield   | 4x            | 0.10               | 17 mm            |
| Phase Contrast  | 10x           | 0.25               | 8 mm             |
| Phase Contrast  | 40xR          | 0.65               | 0.4 mm           |
| Phase Contrast  | 100xR oil     | 1.25               | 0.25 mm          |
| <b>43300-540 (Binocular Head with 4 Achromatic Objectives)</b>      |               |                    |                  |
| Brightfield   | 4x            | 0.10               | 17 mm            |
| Phase Contrast  | 10x           | 0.25               | 6.6 mm           |
| Phase Contrast, Achromatic  | 40xR          | 0.65               | 0.57 mm          |
| Phase Contrast, Achromatic  | 100xR oil     | 1.25               | 0.19 mm          |
| <b>43300-542 (Trinocular Head with 4 Planachromatic Objectives)</b> |               |                    |                  |
| Brightfield   | 4x            | 0.10               | 17 mm            |
| Phase Contrast  | 10x           | 0.25               | 8 mm             |
| Phase Contrast  | 40xR          | 0.65               | 0.4 mm           |
| Phase Contrast  | 100xR oil     | 1.25               | 0.25 mm          |
| <b>43300-544 (Trinocular Head with 4 Achromatic Objectives)</b>     |               |                    |                  |
| Brightfield   | 4x            | 0.10               | 17 mm            |
| Phase Contrast  | 10x           | 0.25               | 6.6 mm           |
| Phase Contrast  | 40xR          | 0.65               | 0.57 mm          |
| Phase Contrast, Achromatic  | 100xR oil     | 1.25               | 0.19 mm          |

R = Retractable lens

## Ideal for viewing transparent specimens

Many specimens that are not stained have poor contrast or poor natural absorption of light. This prevents brightfield microscopy from rendering the specimens visible or limits the resolution of fine detail. These specimens require contrast enhancing techniques such as phase contrast, polarization or darkfield, to improve observation. The VWR VistaVision Phase Contrast microscopes are the best

instruments for observing these types of samples, including, but not limited to:

- Transparent specimens — bacteria, spermatozoa and mites
- Diatoms
- Fresh water and marine protozoa and other microorganisms
- Colloidal suspensions and liquids in general
- Tissues and other unstained specimens
- Living creatures such as insects or marine algae
- Hairs and fibers

Featuring the same benefits as VWR VistaVision Brightfield microscopes — brilliant resolved images, fatigue-reducing design for increased workflow, and durability backed by a five-year warranty — the VWR VistaVision Phase Contrast microscopes offer options unique to phase contrast work. One option, the Achromatic objective with longer working distance, is extremely beneficial when observing suspensions or liquid samples. The increased working distance allows observation at different levels within the specimen without touching the cover slip or specimen. Another convenience is an Abbe condenser with a five-position Zernike-type turret with four phase plates and one brightfield position.

## Phase Contrast Microscopes

| Description                                 | Cat. No.  | Each      |
|---|-----------|-----------|
| Binocular with 4 Planachromatic Objectives  | 43300-538 | \$3095.00 |
| Binocular with 4 Achromatic Objectives      | 43300-540 | 2617.00   |
| Trinocular with 4 Planachromatic Objectives | 43300-542 | 3250.00   |
| Trinocular with 4 Achromatic Objectives     | 43300-544 | 2895.00   |

# VWR Polarization and Darkfield Illumination Techniques

## Increase Your Information Base

### Optically symmetrical specimens

Polarized light augments the Brightfield microscope and offers a wealth of information not usually available with only brightfield technique. It is useful in materials science, geology, biochemistry, biology, metallurgy and medicine. Polarizing microscopes are designed to make the following optically asymmetrical substances visible:

- Cancerous and pre-cancerous tissue
- Salts, sugars and non-cubic crystalline mineral structures

- Organic acids and amino acids
- Biopharmaceutical agents, alkaloids, vitamin compounds
- Neurotransmitters (e.g. serotonin, dopamine and endorphins)
- Defects in plastic products, natural and synthetic gemstones, polymers, fibers, cloth and silicone substrates

The Polarized Light microscope is equipped with a polarizer and an analyzer. The polarizer is placed in the light path before the specimen. The analyzer is then placed between the objective and the microscope head (body tube). When the polarizer and analyzer are positioned axially (crossed at right angles to each other), the specimen being studied will show birefringence or double refraction, revealing both physical details and the refraction characteristics that differentiate it from similar substances.

### Darkfield illumination enhances contrast

Transmitted darkfield illumination finds its primary applications in biological disciplines. Some examples are:

- Invertebrate parasites, bacterial pathogens, embryonic tissue
- Tissue damage caused by viral and bacteriological infections
- Artifacts, fossilized and living aquatic organisms
- Fungi and yeast
- Evaluation of defects in gemstones and silicone wafers

The darkfield technique uses oblique illumination to enhance contrast. As the name implies, darkfield microscopy illuminates a specimen against a dark background using one of two specialized condenser set-ups. Both methods create a hollow light cone, allowing no direct illumination of the sample. Consequently, only oblique light is present. With a properly adjusted microscope, only the oblique light rays scattered by the specimen exist in the field. The effect is that the specimen shines against the black background, becoming visible to the investigator.

Highly resolved images require a dedicated oil immersion darkfield condenser. Any samples magnified by 100x require a specialized 100x objective with an internal iris diaphragm (43300-632). For less exacting work (magnifications from 4x to 40x), a simpler approach using a spider stop is adequate. The spider stop (12778-214) is inserted beneath the normal brightfield Abbe condenser and can be easily removed from the light path, when you want to use the microscope for other techniques.

#### Polarized Light Kit for Use with Brightfield Microscopes

| Description         | Cat. No.  | Each     |
|---------------------|-----------|----------|
| Polarized Light Kit | 12778-212 | \$195.00 |

#### Darkfield Accessories for Use with Research and Education Microscopes

| Description                                  | Cat. No.  | Each     |
|--|-----------|----------|
| Oil Immersion Darkfield Condenser, 1.35 N.A. | 43300-652 | \$545.40 |
| Darkfield Stop                               | 12778-214 | 78.00    |

**VWR™  
VistaVision™  
Education  
Microscopes**

**Value Priced  
Optical Quality**



43300-532



43300-530

### Sharp images in all magnifications

An exceptional value, the education models are ideally suited for classroom and routine laboratory work. Although comparable to the research line in optical quality and ergonomic design, the VWR VistaVision Education microscopes feature a compact stand, four-turret nosepiece and semiplan objectives. Their excellent optical performance delivers sharp, high contrast images in all magnifications. Available in both Monocular and Binocular configurations with a 360° rotating head for sharing discoveries, the VWR VistaVision Education models feature a 1.25 Abbe condenser and four focus functioning. Spring loaded objective (40x and 100x) lenses, together with a mechanical stop for stage travel, prohibit damage to optics, microscope slides, or specimens. The high eye-point eyepieces that accept pointers and reticles for measurement and counting make it easy for students to locate and view their samples.

VWR VistaVision Education microscopes let you spend less time at the microscope and more time on topic because:

- The parfocal and parcentered objectives maintain focus, reducing observation time
- The 13.5x12.5cm (5.3x4.9") graduated mechanical stage with precision controls expedite location accuracy and eliminate stage drift
- A quadruple-position objective turret facilitates changing objectives with an easy grip, ball-bearing operation
- The Seidentopf head design with interpupillary adjustment quickly adapts to individual needs
- The individual diopter adjustment accommodates vision corrections

Plus, these Education microscopes feature a heavy cast metal frame and precision all metal focusing mechanism. Backed by a five-year warranty to protect and insure your investment, the VWR VistaVision Education microscopes consistently perform at a high level.

### VWR VistaVision Education microscopes are supplied with the following objectives:

| DIN Standard Objective            | Magnification | Numerical Aperture | Working Distance |
|-----------------------------------|---------------|--------------------|------------------|
| <b>43300-530 (Monocular Head)</b> |               |                    |                  |
| Brightfield, Semi-Planachromatic  | 4x            | 0.10               | 23 mm            |
| Brightfield, Semi-Planachromatic  | 10x           | 0.25               | 4.1 mm           |
| Brightfield, Semi-Planachromatic  | 40xR          | 0.65               | 0.60 mm          |
| Brightfield, Semi-Planachromatic  | 100xR oil     | 1.25               | 0.25 mm          |
| <b>43300-532 (Binocular Head)</b> |               |                    |                  |
| Brightfield, Semi-Planachromatic  | 4x            | 0.10               | 23 mm            |
| Brightfield, Semi-Planachromatic  | 10x           | 0.25               | 4.1 mm           |
| Brightfield, Semi-Planachromatic  | 40xR          | 0.65               | 0.60 mm          |
| Brightfield, Semi-Planachromatic  | 100xR oil     | 1.25               | 0.25 mm          |

R = Retractable lens

### Education Microscopes with Four Objectives

| Description | Cat. No.  | Each     |
|-------------|-----------|----------|
| Monocular   | 43300-530 | \$935.00 |
| Binocular   | 43300-532 | 1172.00  |

## Reveal fluorescing materials

Fluorescence imaging is central to many biomedical research investigations and its importance is increasing daily. However, the high cost of fluorescent equipment often inhibits a researcher from using this tool. Now, researchers can use VWR VistaVision's value-priced Epifluorescent microscope to reveal the presence of fluorescing material with extraordinary sensitivity. This microscope is supplied complete with six high-contrast objectives suitable for either brightfield or epifluorescence work.

Based on the VWR VistaVision Research microscope design, the Epifluorescent model delivers the same brilliant, sharp images and precision controls ideal in high-performance optical instruments. Suitable for all industrial and biological fluorescence applications, the Epifluorescent microscope utilizes a 100-watt mercury burner light source, high quality collector lens system and a centerable iris diaphragm. In addition to the standard filter sets, virtually any other combination of filters is available to interpret the many new fluorophores (stains) offered today. For any specified fluorophore, the manufacturer of the stain can provide the exciter, emitter and dichroic wavelengths required, and we will produce a custom filter set to meet your application needs.

The two precision filter sets supplied with our standard configuration are designed to provide superior performance in conjunction with a wide variety of today's most common fluorophores. The FFP-20 filter will, for example, simultaneously visualize GFP and its mutants.

# VWR™ VistaVision™ Epifluorescent Microscope

Today's Answer for  
Biomedical Research



12778-196

### Filter sets supplied with the Epifluorescent microscope:

#### Blue/Green Dual Band

| Excitation | Dichroic | Emission | Filter No. |
|------------|----------|----------|------------|
| 400; 500   | 385; 502 | 460; 550 | FFP-20     |

Blue Channel Dyes: DAPI, Hoechst 33342 and 33258, AMCA/AMCA-X, Marina Blue and others.

Green Channel Dyes: Fluorescein (FITC), MitoTracker Green, Oregon Green 488, Fluo-4, FluorX, CY2, Alexa Fluor 488, Calcein, Rhodamine 100, and others.

#### Red - Orange

| Excitation | Dichroic | Emission | Filter No. |
|------------|----------|----------|------------|
| 535DF35    | 570DRLP  | 605DF50  | FFP-25     |

Red-Orange Channel Dyes: Alexa Fluor 546, BODIPY TMR, CY3, Ethidium Bromide, MitoTracker Orange, Nile Red, POPO-3, PKH26, Propidium Iodide, Rhodamine Palloidin, Tetramethylrhodamine (TRITC), 5-TAMRA (TRITC derivative), Rhod-2, Calcium Orange, and other red and orange dyes.

### The VWR VistaVision Epifluorescent microscope is supplied with the following objectives:

| DIN Standard Objective             | Magnification | Numerical Aperture | Working Distance |
|------------------------------------|---------------|--------------------|------------------|
| <b>12778-196 (Trinocular Head)</b> |               |                    |                  |
| Planachromatic                     | 4x            | 0.10               | 17 mm            |
| Planachromatic                     | 10x           | 0.25               | 8 mm             |
| Planachromatic                     | 40xR          | 0.65               | 0.4 mm           |
| Achromatic, Fluorescence           | 25x           | 0.65               | 0.62 mm          |
| Achromatic, Fluorescence           | 40xR          | 1.00               | 0.25 mm          |
| Achromatic, Fluorescence           | 100xR oil     | 1.30               | 0.25 mm          |

R = Retractable lens

### Epifluorescent Microscope with Six Objectives and Two Filter Sets

| Description | Cat. No.  | Each      |
|-------------|-----------|-----------|
| Trinocular  | 12778-196 | \$7995.00 |



12778-198 with TC Flask

**VWR™**  
**VistaVision™**  
**Inverted**  
**Microscope**

**Six Objectives**  
**Add Flexibility**

**Enables observation using both brightfield and phase contrast techniques**

The enhanced VWR VistaVision Inverted microscope is responsive to the ever increasing demand for microscopic observation of living cells. This state-of-the-art optical instrument features a swing-out condenser that accommodates cultivation vessels including roller bottles, tissue culture flasks, 96-well plates, and petri dishes. While maintaining its compact size (43x33x20cm/17x13x8"), the stable trinocular design favors image documentation and vibration-free investigation. The large stage surface makes it easy to observe many specimen containers at once. In addition, an optional mechanical stage with four sample holders for 96-well plates, petri dishes, hemacytometer and test tubes is available to increase flexibility.

Incorporating the same fatigue-reducing ergonomics and time saving benefits found on the popular VWR VistaVision Research microscopes, the Inverted microscope goes one step further. It is supplied standard with three brightfield and three phase contrast long working distance (LWD) objectives designed specifically for examination of specimens through tissue culture containers. A Planachromatic 4x objective is also available as an option. The Inverted microscope also features a quintuple-position objective turret, an easily centerable condenser, and a swing-out filter holder.

**The VWR VistaVision Inverted microscope is supplied with the following objectives:**

| DIN Standard Objective         | Magnification | Numerical Aperture | Working Distance |
|--------------------------------|---------------|--------------------|------------------|
| Brightfield, Planachromatic    | 10x           | 0.25               | 8.1 mm           |
| Brightfield, Planachromatic    | 25x           | 0.4                | 4.8 mm           |
| Brightfield, Planachromatic    | 40xR          | 0.6                | 3.3 mm           |
| Phase Contrast, Planachromatic | 10x           | 0.25               | 8.1 mm           |
| Phase Contrast, Planachromatic | 25x           | 0.4                | 4.8 mm           |
| Phase Contrast, Planachromatic | 40x           | 0.6                | 3.3 mm           |

All objectives are LWD and corrected for 1.2 mm vessel wall thickness.



*Inverted Objectives*

**Inverted Microscope with Six Objectives**

| Description | Cat. No.  | Each      |
|-------------|-----------|-----------|
| Trinocular  | 12778-198 | \$3813.00 |

**Mechanical Stage with Four Specimen Holders**

| Description           | Cat. No.  | Each     |
|-----------------------|-----------|----------|
| Graduated, Attachable | 12778-200 | \$455.00 |

43300-548

# VWR™ VistaVision™ Metallurgical Microscope

Reflected  
Illumination  
Enhances Analyses

## Ideal for critical inspections

The VWR VistaVision Metallurgical microscope offers reflected (incident) illumination for use in petrographic studies and materials analysis. In addition to the transmitted Koehler illumination, a second 6V, 20W halogen lamp provides reflected illumination, permitting close observation of solid specimens. The reflected light path is centerable and focusable and contains three easily selected color filters (blue, yellow, green), further



enhancing analysis. A polarizer and analyzer are also included. Blue and clear frost filters are supplied for use in the transmitted light path.

A glass plate on the extra large (19x14cm/7.3x5.5") graduated mechanical stage lets you work with large or cumbersome specimens. The

two LWD (long working distance) objectives have no correction for a cover slip, allowing direct observation of the sample to facilitate critical inspections. All five objectives supplied fit on the quintuple-position reversed objective turret, making objective selection quick and easy.

## The VWR VistaVision Metallurgical microscope is supplied with the following objectives:

| DIN Standard Objective      | Magnification | Numerical Aperture | Working Distance |
|-----------------------------|---------------|--------------------|------------------|
| Brightfield, Planachromatic | 4x            | 0.1                | 17 mm            |
| Brightfield, Planachromatic | 10x           | 0.25               | 8.9 mm           |
| Brightfield, Planachromatic | 25xLWD        | 0.4                | 4.8 mm           |
| Brightfield, Planachromatic | 40xLWD        | 0.6                | 3.3 mm           |
| Brightfield, Planachromatic | 60x           | 0.85               | 0.3 mm           |

### Metallurgical Microscope with Five Objectives

| Description | Cat. No.  | Each      |
|-------------|-----------|-----------|
| Trinocular  | 43300-548 | \$2514.75 |

**VWR™  
VistaVision™  
Image  
Documentation  
Systems and  
Camera  
Accessories**

**Solve Your Image  
Documentation  
Dilemmas**

**Integrated solutions**

VWR offers multiple camera systems tailored to meet the most demanding image documentation application



43300-536, 43300-550

and budget requirements. Although VWR VistaVision microscopes will accept various makes of cameras, only the systems listed below have met our exacting performance criteria and are proven capable of providing an integrated solution. All imaging systems require a trinocular microscope head to mount the camera. They ship complete with a high-quality optical adapter.

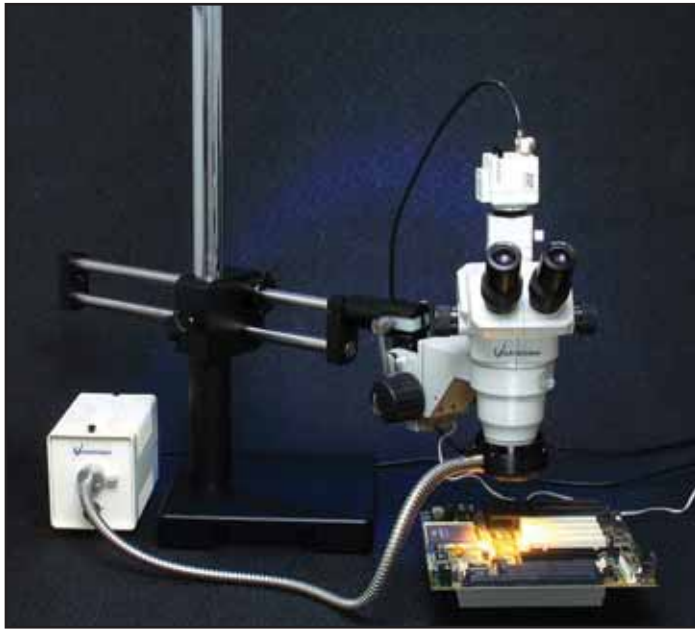
The systems are designed around three camera types: 35mm, digital still and video. Digital video camera options deliver resolution of 1280x1024 pixels and are available with a variety of software programs, from basic to high-end. The video cameras require a USB or FireWire® computer port for connection and a Pentium® class processor. Software can be purchased separately for use with other imaging systems. Also, the VWR VistaVision Digital Imaging Systems can be configured to fit any make or model of microscope.



43300-554



43300-534, 12778-218



12778-136, 43300-556



Specimen viewed through 12778-136 (left image)

### Camera Systems for Research Microscopes

| Description  | Cat. No.  | Each     |
|--|-----------|----------|
| 35mm Camera (supplied with optical adapter, remote shutter release, camera batteries)  | 43300-554 | \$921.85 |
| Nikon CoolPix® 4500 with Optical Adapter, 4.0 Effective Megapixel CCD with True (non-interpolated) Image Resolution of 2272 x 1074 and 4x Stepless Digital Zoom. (Supplied with 16MB compact flash card, audio/video cable and USB cable)  | 12778-218 | 1070.00  |
| Analog CCD Video Camera with NTSC Output, 480 Lines of Resolution, Controls for Color, Balance and Gain. (Supplied with power adapter, optical adapter and RCA coaxial cable)  | 43300-550 | 822.97   |
| FireWire® Digital Camera, 1280 x 1024 Resolution (includes optical adapter, FireWire cable and interface board with basic software (to import, scan, archive and database images. Allows image annotation and report generation, email links, slide show presentations and archiving of other file types.) | 12778-226 | 4195.00  |
| FireWire Digital Camera with Measurement Software. (In addition to the basic software, introduces x-y point-to-point and multi-pointed lines, area and angle measurement with calipers in metric, English or pixels.)  | 12778-230 | 5185.00  |
| FireWire Digital Camera with Advanced Measurement Software. (In addition to the measurement software, introduces analysis wizard for autodetection based on user-defined density or color values, fractioning, porosity, grain size and other analysis based on thresholding and filtering.)               | 12778-234 | 6615.00  |
| Basic Measurement Software (single-user license)   | 12778-260 | 2550.00  |

Note: PCI slot must be available and Windows® 98 2nd Edition, Windows ME, Windows 2000 or Windows XP with P-2-400Mhz required.

### Camera Systems for StereoZoom Microscopes

| Description   | Cat. No.  | Each     |
|---|-----------|----------|
| 35mm Camera (supplied with optical adapter, remote shutter release, camera batteries)   | 43300-560 | \$921.85 |
| Nikon CoolPix 4500 with Optical Adapter, 4.0 Effective Megapixel CCD with True (non-interpolated) Image Resolution of 2272 x 1074 and 4x Stepless Digital Zoom. (Supplied with 16MB compact flash card, audio/video cable and USB cable)  | 12778-220 | 1375.00  |
| Analog CCD Video Camera with NTSC Output, 480 Lines of Resolution, Controls for Color, Balance and Gain. (Supplied with power adapter, optical adapter, and RCA coaxial cable)  | 43300-556 | 822.97   |
| FireWire Digital Camera, 1280 x 1024 Resolution (includes optical adapter, FireWire cable and interface board with basic software (to import, scan, archive and database images. Allows image annotation and report generation, email links, slide show presentations and archiving of other file types.) | 12778-228 | 4195.00  |
| FireWire Digital Camera with Measurement Software. (In addition to the basic software, introduces x-y point-to-point and multi-pointed lines, area and angle measurement with calipers in metric, English or pixels.)   | 12778-232 | 5185.00  |
| FireWire Digital Camera with Advanced Measurement Software. (In addition to the measurement software, introduces analysis wizard for autodetection based on user-defined density or color values, fractioning, porosity, grain size and other analysis based on thresholding and filtering.)              | 12778-236 | 6615.00  |
| Basic Measurement Software (single-user license)  | 12778-260 | 2550.00  |

Note: PCI slot must be available and Windows® 98 2nd Edition, Windows ME, Windows 2000 or Windows XP with P-2-400Mhz required.

# VWR™ VistaVision™ Reticles and Miscellaneous Accessories

VWR offers a complete line of VistaVision reticles to make measuring or counting specimens in a microscopic field easier. Custom reticles are available to suit specific applications. Contact your VWR sales representative for pricing.

## Stage Micrometer Calibration Plates

Stage micrometer calibration plates feature a finely graduated, numbered scale (0.01mm) and are used to calibrate distances between graduations of your eyepiece reticle at each power setting on the microscope. The calibration factor is then used to calculate the actual dimension of your specimen. For extremely accurate measurements, take a video image and digitize it for use with your computer image analysis software (see page 15).

## Reticles

| Scale, mm   | For Use With   | Cat. No.  | Each    |
|---|--|-----------|---------|
| 10 x 100  | 43300-548  | 43300-672 | \$53.56 |
| 10 x 100  | 43300-530, -532, -534, -536, -538, -540, -542, -544, 12778-198 | 43300-896 | 53.56   |
| 10 x 100  | Stereo/StereoZoom Microscopes                                  | 43300-674 | 53.56   |
| 5 x 100   | 43300-548  | 43300-676 | 53.56   |
| 5 x 100   | 43300-530, -532, -534, -536, -538, -540, -542, -544, 12778-198 | 43300-894 | 53.56   |
| 5 x 100   | Stereo/StereoZoom Microscopes                                  | 43300-678 | 53.56   |
| <b>Reticles, Square grid</b>                        |  |           |         |
| 10  | 43300-548  | 43300-680 | \$53.56 |
| 10  | 43300-530, -532, -534, -536, -538, -540, -542, -544, 12778-198 | 43300-892 | 53.56   |
| 10  | Stereo/StereoZoom Microscopes                                  | 43300-682 | 53.56   |
| 10 x 0.5  | 43300-548  | 43300-684 | 53.56   |
| 10 x 0.5  | 43300-530, -532, -534, -536, -538, -540, -542, -544, 12778-198 | 62111-152 | 73.05   |
| 10 x 0.5  | Stereo/StereoZoom Microscopes                                  | 43300-686 | 53.56   |
| <b>Reticles, Cross Hair</b>                         |  |           |         |
| —   | 43300-548  | 43300-688 | \$53.56 |
| —   | 43300-530, -532, -534, -536, -538, -540, -542, -544, 12778-198 | 43300-890 | 53.56   |
| —   | Stereo/StereoZoom Microscopes                                  | 43300-690 | 53.56   |
| <b>Reticles, Photo Framing</b>                      |  |           |         |
| —   | 43300-548  | 43300-692 | \$52.00 |
| —   | 43300-530, -532, -534, -536, -538, -540, -542, -544, 12778-198 | 43300-888 | 52.00   |
| —   | Stereo/StereoZoom Microscopes                                  | 43300-694 | 52.00   |
| <b>Stage Micrometer Calibration Plates, Metric</b>  |  |           |         |
| —   | All VWR VistaVision Microscopes                                | 43300-696 | \$81.37 |
| <b>Stage Micrometer Calibration Plates, English</b> |  |           |         |
| —   | All VWR VistaVision Microscopes                                | 43300-698 | \$80.03 |

## Miscellaneous Accessories

| Description            | For Use With   | Cat. No.  | Each     |
|------------------------|--|-----------|----------|
| <b>Microscope Case</b> |  |           |          |
| Vinyl                  | All VWR VistaVision Stereo (except Boom and Pole Stand Models) and Select Compound Microscopes | 43300-700 | \$142.14 |
| <b>Dust Covers</b>     |  |           |          |
| Medium                 | 43300-504, -506, -508, -510, -512, -514  | 43300-702 | \$8.64   |
| Large                  | All VWR VistaVision Stereo (except Boom and Pole Stand Models)                                 | 43300-670 | 9.71     |
| X-Large                | 43300-536, -542, -544, 12778-198   | 43300-704 | 11.76    |
| XX-Large               | 43300-548  | 43300-706 | 14.22    |
| <b>Eyecups</b>         |  |           |          |
| For 23 mm Eyepieces    | 43300-530, -532, -534, -536, -538, -540, -542, -544, -548, 12778-198                           | 62111-150 | \$5.00   |
| For 28 mm Eyepieces    | 43300-504, -506, -508, -510, -512, -514, -528  | 43300-708 | 9.73     |
| For 30.5 mm Eyepieces  | All VWR VistaVision Stereo Microscopes   | 43300-710 | 7.21     |
| <b>Filters</b>         |  |           |          |
| Blue                   | VWR VistaVision Compound Microscopes   | 43300-594 | \$14.42  |
| Green                  | VWR VistaVision Compound Microscopes   | 43300-596 | 14.42    |
| Clear Frost            | VWR VistaVision Compound Microscopes   | 43300-598 | 14.42    |

## Bulbs

| Description       | For Use With   | Cat. No.  | Each    |
|-------------------|--|-----------|---------|
| Incandescent, 15W | 43300-504, -506, -508                                    | 43300-724 | \$10.80 |
| Fluorescent, 5W   | 43300-510, -512, -514, -528, 12778-122, -144, -150       | 43300-726 | 9.57    |
| Halogen, 5W       | 43300-510, -512, -514                                    | 43300-728 | 14.42   |
| Halogen, 15W      | 43300-528, 12778-122, -124, -126, -142, -144, -148, -150 | 43300-730 | 21.64   |
| Halogen, 20W      | VWR VistaVision Compound Microscopes                     | 43300-732 | 8.24    |
| Halogen, 50W      | 43300-714 Light Source                                   | 43300-734 | 44.29   |
| Halogen, 150W     | 43300-740 Light Source                                   | 43300-736 | 49.80   |
| Mercury, 100W     | 12778-196  | 12778-216 | 215.00  |

Specialty Reticles and a Microscope Arm Rest are also available. Contact your VWR representative for information.

## VWR™ VistaVision™ Application Guide

| Type of Account                        | Application   | Types of Samples   | Microscopes   |
|--|---|--|---|
| Education – University                 | Classrooms - Biology, BioChem, Botany, Horticulture and Veterinary                        | animal dissection, plant parts, mitosis, nuclei, hormones, cholesterol, from cells to entire organisms   | Basic Stereo and StereoZoom Models <b>43300-504</b> thru <b>-514</b> and <b>43300-528</b>                           |
| Education – University                 | Research and Classroom - Immunology, Cell Biology, Entomology, Plant Pathology, Chemistry | AIDS therapies, amino acids, anti-cancer agents, DNA, endorphins, fatty acids, lipids, nucleotides, neurotransmitters, organic carbons, polymers, proteins and much more | Basic Compound Models <b>43300-530</b> , <b>-532</b>  |
| BioPharmaceutical                      | Research and Production - Drugs/Antibiotics, Pesticides, Vitamins and Fertilizers         | AIDS therapies, amino acids, anti-cancer agents, DNA, endorphins, fatty acids, lipids, nucleotides, neurotransmitters, organic carbons, polymers, proteins and much more | Advance Compound Models <b>43300-534</b> to <b>-544</b> and <b>12778-198</b> (Better objectives and Phase Contrast) |
| Computer/Microchip                     | Production - Integrated Circuits, Computer Interior Components and OEM                    | magnetic thin film, silicon, hard disks, CDs, IC surface features  | Advanced Stereo Models, OptiZoom, ProZoom and 8:1 Zoom  |
| Food and Beverage                      | Research and Production Bacteriology  | flavors, spices, dairy products, beer, burgers, fries, canned foods and soft drinks  | Advanced Compound Models <b>43300-534</b> to <b>-544</b> and <b>12778-198</b>                                       |
| Mining, Metallurgy and Mineralogy      | Production/Inspection - Assays, Gemology, Geology, Soil Analysis                          | castings, crystals, salts, gemstones, precious metals, effluents, meteorites, rocks, fluorescence and darkfield  | Advanced Stereo   |
| Forensics                              | Investigation   | gunpowder/explosives, knives, DNA, saliva, mace  | Advanced Stereo and Compound  |
| Ceramics                               | Research  | superconducting materials  | Advanced Stereo   |
| Industrial, Cosmetic, Archeology, Wine | Production, QC and Research   | watch movements, fragrances, dinosaur bones/relics, grape varietals  | Advanced Stereo and Compound  |



## Accessories for VWR™ VistaVision™ Compound Microscopes (cont'd)

| Cat. No.  | List Price | Description           | 43300 | MB-A<br>-530 | BB-A<br>-532 | BB-P<br>-534 | TB-P<br>-536 | BP-P<br>-538 | BP-A<br>-540 | TP-P<br>-542 | TP-A<br>-544 | T-RTP<br>-548 | TP-PB<br>12778-198 |
|-----------|------------|-----------------------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------------|
| 43300-700 | \$142.14   | Microscope Case Vinyl |       | •            | •            | •            | •            | •            | •            | •            | •            |               |                    |
| 43300-670 | 9.71       | Dust Cover Large      |       | •            | •            | •            | •            | •            | •            | •            | •            |               |                    |
| 43300-704 | 11.76      | Dust Cover XL         |       |              |              |              | •            |              |              | •            | •            |               | •                  |
| 43300-706 | 14.22      | Dust Cover XXL        |       |              |              |              |              |              |              |              |              | •             |                    |
| 43300-594 | 14.42      | Filter Blue           |       | •            | •            | •            | •            | •            | •            | •            | •            | •             | •                  |
| 43300-596 | 14.42      | Filter Green          |       | •            | •            | •            | •            | •            | •            | •            | •            | •             | •                  |
| 43300-598 | 14.42      | Filter Frosted        |       | •            | •            | •            | •            | •            | •            | •            | •            | •             | •                  |

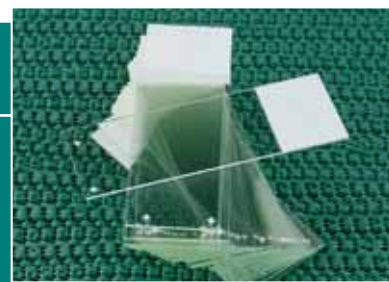
## Accessories for VWR™ VistaVision™ Stereo Microscopes

| Cat. No.  | Each    | Description          | 43300 | Stereo           |                  | StereoZoom        |                  |           |          |          |   |
|-----------|---------|----------------------|-------|------------------|------------------|-------------------|------------------|-----------|----------|----------|---|
|           |         |                      |       | Current Style    |                  | Old Style         |                  | New Style |          |          |   |
|           |         |                      |       | DI Series        | HF Series        | Illuminated Stand | Pole/Boom Stand  | ProZoom   | OptiZoom | 8:1 Zoom |   |
|           |         |                      |       | -504, -506, -508 | -510, -512, -514 | -518, -520, -522  | -516, -524, -526 |           |          |          |   |
| 43300-900 | \$34.13 | Eyepiece 10x         |       | •                | •                |                   |                  |           |          |          |   |
| 43300-574 | 80.27   | Eyepiece 10x         |       |                  |                  | •                 | •                |           |          |          |   |
| 43300-576 | 87.55   | Eyepiece 15x         |       |                  |                  | •                 | •                |           |          |          |   |
| 43300-578 | 91.67   | Eyepiece 20x         |       |                  |                  | •                 | •                |           |          |          |   |
| 43300-712 | 154.50  | Auxiliary Lens 0.5x  |       |                  |                  | •                 | •                |           |          |          |   |
| 43300-668 | 169.95  | Auxiliary Lens 0.75x |       |                  |                  | •                 | •                |           |          |          |   |
| 43300-664 | 169.95  | Auxiliary Lens 1.5x  |       |                  |                  | •                 | •                |           |          |          |   |
| 43300-666 | 185.40  | Auxiliary Lens 2.0x  |       |                  |                  | •                 | •                |           |          |          |   |
| 12778-154 | 95.00   | Eyepiece 10x         |       |                  |                  |                   |                  | •         |          |          |   |
| 12778-156 | 95.00   | Eyepiece 15x         |       |                  |                  |                   |                  | •         |          |          |   |
| 12778-158 | 95.00   | Eyepiece 20x         |       |                  |                  |                   |                  | •         |          |          |   |
| 12778-160 | 225.00  | Auxiliary Lens 0.5x  |       |                  |                  |                   |                  | •         |          |          |   |
| 12778-162 | 225.00  | Auxiliary Lens 0.75x |       |                  |                  |                   |                  | •         |          |          |   |
| 12778-164 | 225.00  | Auxiliary Lens 1.5x  |       |                  |                  |                   |                  | •         |          |          |   |
| 12778-166 | 225.00  | Auxiliary Lens 2.0x  |       |                  |                  |                   |                  | •         |          |          |   |
| 12778-168 | 95.00   | Eyepiece 10x         |       |                  |                  |                   |                  |           | •        |          |   |
| 12778-170 | 95.00   | Eyepiece 15x         |       |                  |                  |                   |                  |           | •        |          |   |
| 12778-172 | 95.00   | Eyepiece 20x         |       |                  |                  |                   |                  |           | •        |          |   |
| 12778-174 | 225.00  | Auxiliary Lens 0.5x  |       |                  |                  |                   |                  |           | •        |          |   |
| 12778-176 | 225.00  | Auxiliary Lens 0.75x |       |                  |                  |                   |                  |           | •        |          |   |
| 12778-178 | 225.00  | Auxiliary Lens 1.5x  |       |                  |                  |                   |                  |           | •        |          |   |
| 12778-180 | 225.00  | Auxiliary Lens 2.0x  |       |                  |                  |                   |                  |           | •        |          |   |
| 12778-182 | 95.00   | Eyepiece 10x         |       |                  |                  |                   |                  |           |          |          | • |
| 12778-184 | 95.00   | Eyepiece 15x         |       |                  |                  |                   |                  |           |          |          | • |
| 12778-186 | 95.00   | Eyepiece 20x         |       |                  |                  |                   |                  |           |          |          | • |
| 12778-188 | 225.00  | Auxiliary Lens 0.5x  |       |                  |                  |                   |                  |           |          |          | • |
| 12778-190 | 225.00  | Auxiliary Lens 0.75x |       |                  |                  |                   |                  |           |          |          | • |
| 12778-192 | 225.00  | Auxiliary Lens 1.5x  |       |                  |                  |                   |                  |           |          |          | • |
| 12778-194 | 225.00  | Auxiliary Lens 2.0x  |       |                  |                  |                   |                  |           |          |          | • |

# VWR International



offers a complete selection of **Cover Glasses** and **Microscope Slides**.



For more information, see VWR's 2003/2004 General Catalog or visit [vwr.com](http://vwr.com).



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