10. Optical instruments and Microscopes

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1

1 Round Magnifier

The large plastic lens is fitted with an integrated smaller additional lens. The frame and handle is black. Supplied in self-service carton box.

Werner Dorsch

Lens	Dimensions	Magnification	Colour	PK	Cat. No.
mm	mm				
Ø 48	127 x 59 x 11	2,5-fold/5-fold	black	1	**6.273 732**
Ø 63	152 x 70 x 12	2-fold/4-fold	black	1	**6.273 733**
Ø 74	187 x 86 x 17	2-fold/4-fold	black	1	**6.273 734**

2

2 Illuminated magnifying lens Lux-50

Orange body colour, with illuminator and plastic lens. Requires 2 x 1.5 V AA batteries for operation (included).

Lens	Magnification	PK	Cat. No.
mm			
Ø 50	2.5x - 5x	1	**9.151 817**

3

3 Handheld magnifier with illumination

- Hand held magnifier with magnification of 3X and 5X (depending of the view location)
- Ergonomic handle design
- Aspherical lens provides spherical aberration and distortion free images with edge-to-edge sharpness.
- LED bulb with on/off control.
- Adjustable angle of illumination.

ISOLAB

Description	PK	Cat. No.
3X / 5X magnification	1	**6.267 407**

4

9.151 680

Magnifying lens, economic

With practical additional lens in the handle. Particularly suitable for those who require a low level of magnification. An additional high-magnification lens enables small details to be read. Transparent plastic frame ensures easy orientation on the reading material. With eyelet in the end of the handle for round-the-neck cord which is supplied. The biconvex reading magnifiers offer a large visual field in a medium magnification range. Plano-convex additional lens with 5x magnification in handle.

Eschenbach

5

9.151 688

Lens	Magnification	PK	Cat. No.
mm			
Ø 100	2.0 x 4.1 dpt	1	**6.244 118**
Ø 65	3.0 x 7.7 dpt	1	**9.151 680** 4
Ø 80	2.3 x 5.4 dpt	1	**9.151 682**
80 x 40	2.4 x 5.7 dpt	1	**9.151 688** 5

6

6 Illuminated pocket magnifiers, mobilux® LED

The tried and tested illuminated hand-held magnifiers now feature a new design and improved functions.
- Easy to use: large, easy to operate light switch
- 3 different filters are supplied
- The batteries are easy to change
- Incl. protective case for lens

Eschenbach

Dimensions	Magnification	PK	Cat. No.
mm			
Ø 58	6x/24.0 dpt	1	**7.970 900**
Ø 35	7x/28.0 dpt	1	**9.151 181**
Ø 35	10x/38.0 dpt	1	**9.151 182**

7

7 Precision linen testers, plastic

- Linen tester with lateral scale
- Black plastic housing
- Scale: lateral scale with mm graduation

Eschenbach

Lens	Field of view	Height	Magnification	PK	Cat. No.
mm	mm	mm			
diam. 18	20 x 20	35	8x/30dpt	1	**6.236 477**

E & OE.

1 Precision linen testers, metal

- Brass frame, chrome-plated, silk matt finish
- Silica glass lenses, biconvex

Lens mm	Field of view mm	Magnification	PK	Cat. No.
diam. 12.5	10 x 10	12x / 48dpt	1	**9.151 423**
diam. 14.5	15 x 15	10x / 40dpt	1	**9.151 427**
diam. 17.5	20 x 20	8x / 32dpt	1	**9.151 433**
diam. 22.5	25 x 25	6x / 24dpt	1	**9.151 442**
diam. 31.5	30 x 30	5x / 20dpt	1	**9.151 453**

1

2 Folding magnifiers mobilent LED

NEW

Eschenbach

Very compact, high-magnification folding magnifiers suitable for wearing around the neck or for handbag or trouser pockets.
- White plastic housing encloses the lens and makes it dust-tight
- Aspheric PXM® lightweight lens for a distortion-free image with edge-to-edge sharpness
- Efficient LED lighting
- Battery cover is also threaded when using the lanyard

Scope of supply: Magnifier, lanyard

Specifications

Colour temperature: 6000 K
Illumination intensity: > 300 lx (battery dependent)
Battery: 1 x CR 2032 (included)

Magnification	Diopter	Lens mm	PK	Cat. No.
4x	16	Ø 35 mm	1	**6.313 468**
7x	28	Ø 35 mm	1	**6.313 469**
10x	32	Ø 35 mm	1	**6.313 470**

2

Precision folding magnifiers, plastic

Eschenbach

- Glass fibre reinforced, non-breakable polyamide body
- The body is dustproof when closed
- Glass lenses

Description	Lens mm	Lens	Magnification	PK	Cat. No.
Distortion-free image	Ø 23	Achromatic, coated	3x + 6x = 9x	1	**9.151 055** 3
Distortion-free image	Ø 23	Aplanatic	10x	1	**9.151 155**

3

9.151 055

Precision folding magnifiers, metal

Eschenbach

- Matt chromium-plated brass body with eyelet
- Lens surround in black-painted metal

Lens mm	Lens	Magnification	PK	Cat. No.
diam. 15	Achromatic	10x	1	**9.151 040**
diam. 17	Achromatic	20x	1	**9.151 050**
diam. 21	Aplanatic	8x	1	**9.151 051** 4
diam. 21	Aplanatic	10x	1	**9.151 052**
diam. 15	Aplanatic	12x	1	**9.151 053**

4

9.151 051

Precision scale magnifiers

Eschenbach

- Distortion-free image with pinpoint clarity
- Fine focusing via easy-grip focusing ring
- Supplied with standard scale, measuring range 20 mm, 1/10 mm graduation, size: diam. 23 mm
- Housing made from glass fibre reinforced polyamide
- Supplied in a solid plastic box with space for other scales

LED lighting unit for precision scale magnifiers.
- Handle holds 2 batteries (not included)

Description	Magnification	PK	Cat. No.
Magnification	7x / 28,0 dpt	1	**9.151 107** 5
Magnification	10x / 40,0 dpt	1	**9.151 108** 6
Handle with LED illumination for magnifying lenses	--	1	**9.151 106** 7

5 6

9.151 107

9.151 108

7

9.151 106

1

1 Micromagnifier with illumination

NEW

Suitable for inspecting a wide variety of surfaces such as metals, textiles, minerals, varnishes, etc. The wide focusing range enables raised or depressed features (e.g. holes) to be examined in detail. *Eschenbach*

- Precise focusing with adjustable wheel
- Wide adjustment range is able to compensate for a high level of visual impairment
- High brightness level due to large lens aperture
- The LED light can be used when required
- Magnification 30 x, glass lenses

Specifications

Colour temperature: 6500 K
Battery: 2 x AA (not included)

Description	Magnification	PK	Cat. No.
with illumination	30x	1	**6.313 363**

2

2 Light Boxes slimlite plano

Super flat light boxes, only 8 mm thin, with built-in rechargeable battery. *Kaiser Fototechnik*
Illumination by daylight-type LEDs (approx. 5000 Kelvin).
Touch switch for ON/OFF and brightness control, cm and inch scales. Optional mains or battery operation.
Lithium ion battery: 1050 mA. Mains/charging adapter included.

External dimensions (W x D x H) mm	Dimensions Illuminated area (W x D) mm	Lighting	PK	Cat. No.
290 x 200 x 8	220 x 160	23 LEDs	1	**6.270 828**
390 x 270 x 8	320 x 228	33 LEDs	1	**6.270 829**

3

3 Table-top magnifier

- Multifunctional table-top magnifier with magnification power of 2x and 4x depending of the view location.
- Can be operated with one hand
- 4 LED bulbs with on/off control.
- Magnifying lens position and illumination angle can be individually adjusted via the flexible gooseneck system
- Flicker free illumination without heat development
- Aspherical lens provide spherical aberration and distortion free images with edge-to-edge sharpness.
- Ideal for counting bacterial colonies on different culture media

Description	PK	Cat. No.
2X / 4X magnification	1	**6.267 406**

4

4 Illuminated magnifier

Magnifier lens complete with articulated arm. *Exacta Optech*

Lens power: 2 x
Lens dimensions: 190 mm x 157 mm
Illumination: 2 fluorescent lamps: 9 W (230V /50Hz)
Clamp opening: 70 mm

Type	PK	Cat. No.
Magnifier lamp	1	**9.170 701**

E & OE.

Binocular Microscopes for Schools/Laboratories B1-220E-SP

1

Motic

Established Quality with a new design. The B1 series covers a wide range of the daily work for Laboratory and University use. The Elite Series with improved optics and mechanics enables efficient work for many years.

- Observation Tube Binocular 45°/Phototube 30°, 360° rotating
- Widefield eyepieces WF10X/18 mm
- Quadruple revolving nosepiece
- Semi-Plan objectives SP 4X, 10X, 40X S, 100X S-Oil
- Coaxial coarse and fine focusing system with tension adjustment
- Built-in low position coaxial rackless mechanical stage
- Focusable 1.25 N.A. Abbe condenser with iris diaphragm
- LED illumination 3 W with intensity control
- Power supply 100-240 V
- Dust cover and immersion oil

Type	Description	PK	Cat. No.
B1-220E-SP	Binocular	1	**6.284 968** 1
B1-223E-SP	Trinocular	1	**6.284 969**

6.284 968

2 Educational Stereomicroscopes, RED 30S

2

Motic

With independent LED illumination. Innovative and user-friendly. Motics "One-touch" sample clip helps to fix the specimen easily. Fixed arm type stand with large integrated carrying handle for a stable stand and easy transportation.

- With magnification changer (2x, 4x)
- Binocular head, 45° inclined
- Widefield eyepieces WF10X/20 mm
- Objective turret magnification changer (2X, 4X)
- Coarse focusing system with tension adjustment
- Base with fixed arm and carrying handle
- Incident and transmitted rechargeable LED illumination with independent intensity control
- Power supply 100-240 V (CE), charger and batteries included
- Black/white and frosted stage plates, "one-touch" sample clips and dust cover
- 10 years warranty

Type	Description	PK	Cat. No.
RED 30S	Binocular	1	**6.281 648**

Basic Biological Microscope for Education and Routine, BA210E

3

Motic

Compact and robust, the BA210E is ideal for the requirements of colleges and universities as well as for medical training institutes.

- Infinity Optics [CCIS®]
- Observation Tube Siedentopf Type, Binocular -/Phototube 30°, F.N. 20
- Interpupillary Distance 55-75 mm
- Eyepieces High-Eyepoint N-WF 10x/20 mm with dioptre adjustment on both eyepieces and rubber eyecups
- Reversed quadruple revolving nosepiece
- Objectives CCIS EC Plan 4x, 10x, 40x-S, 100x-S-Oil
- Built in low position coaxial, rackless mechanical stage (right hand control)
- Focusable Abbe condenser N.A. 1.25 with iris diaphragm and slot
- Illumination 3 W LED
- Universal power supply 100-240 V (CE)
- Scope of supply: Immersion oil (5 ml), power cord, Allen hexagonal key, thumb crew, vinyl dust cover
- 6 V/30 W HAL illumination available as an option

Optional, available: Phase-contrast 10x/40x, DF 10x-40x, Polarization

Type	Description	PK	Cat. No.
BA210E	Binocular	1	**6.265 838** 3
BA210E	Trinocular	1	**6.266 907**

6.265 838

1

Advanced Upright Microscope for Life Science and Laboratories, BA310E

7.659 854

The BA310E is specially designed for the requirements of daily routine in universities, clinics and laboratories. *Motic*

- Infinity Optics [CCIS®]
- Observation Tube Siedentopf Type, Binocular -/Phototube 30°, F.N. 20
- Interpupillary Distance 48-75 mm
- Eyepieces High-Eyepoint N-WF 10x/20 mm with dioptre adjustment on both eyepieces and rubber eyecups
- Reversed quintuple revolving nosepiece
- Objectives CCIS EC Plan 4x, 10x, 40x-S, 100x-S-Oil
- Built in low position coaxial, rackless mechanical stage (right hand control)
- Focusable Abbe condenser N.A. 0.90/1.25 with iris diaphragm and slot
- Koehler illumination 3 W LED with intensity control
- Universal power supply 100-240 V (CE)
- Scope of supply: Immersion oil (5 ml), power cord, Allen hexagonal key, thumb crew, vinyl dust cover
- 6 V/30 W HAL illumination available on option

Optional, available: Phase-contrast 10x/20x/40x/100x for slider or Turret-condensor, DF 10x-40x for slider or Turret-condensor, Polarization

Type	Description	PK	Cat. No.
BA310E	Binocular	1	**6.262 306**
BA310E	Trinocular	1	**7.659 854** 1

2

Clinical & Lab Microscope for advanced applications, BA410E

9.727 050

Professional microscope for numerous applications in biomedical research. *Motic*

- Infinity Optics [CCIS®]
- Observation Tube Siedentopf Type, Binocular -/Phototube 30°, F.N. 22
- Interpupillary Distance 48-75 mm
- Eyepieces High-Eyepoint N-WF 10x/22 mm with diopter adjustment on both eyepieces and rubber eyecups
- Reversed sextuple nosepiece
- Objectives CCIS EC-H Plan 4x, 10x, 40x-S, 100x-S-Oil
- Low position coaxial, rackless mechanical stage with ceramic insert (right hand control)
- Achromatic swing-out condenser N.A. 0.90/0.13 with iris diaphragm
- Koehler illumination quartz halogen 12V/50W or 12 V/100 W with external lamp house and intensity control
- Auto-off and light-memory function when changing the magnification
- Universal power supply 100-240V (CE)
- Ø 45mm blue filter, immersion oil (5 ml), power cord, Allen hexagonal key, vinyl dust cover
- arm rest, spare fuse

Optional, available: Phase-contrast (Ph 1.2.3), DF 10x-40x, Polarization, Plan fluar objectives, Epi-fluorescence, Multi-head viewing system

Type	Description	PK	Cat. No.
BA410E	Binocular 50 W	1	**9.727 050** 2
BA410E	Binocular 100 W	1	**9.727 051**
BA410E	Trinocular 50 W	1	**9.727 052**
BA410E	Trinocular 100 W	1	**9.727 053**

E & OE.

Light microscopes Panthera C

1

Motic

Upright light microscopes for education, research and diagnostics.
Due to high quality optics and digital features especially suited for professional users.
- Tube type Siedentopf, swiveling
- Widefield oculars for spectacle wearers with diopter adjustment on both oculars
- CCIS® Plan achromatic objectives UC PL
- Reversed coded nosepiece
- Focusable Abbe condenser with iris diaphragm and slot
- Illumination acc. to Köhler, with interchangeable illuminator
- With Motic LightTracer (Intelligent Light Management): LED light intensity, light memory, sleep mode (auto on-off), mode indicator
- Coaxial coarse and fine focusing system with tension adjustment
- Compact, built-in mechanical stage
- Integrated power supply with sleep mode

Additional equipment depending on the model with common contrast methods such as phase contrast, darkfield, single polarization or LED fluorescence (single-channel) possible.

4.668 673

Inclination Tube:	25°
Angle of rotation Tube:	360°
Eyepieces:	Widefield UC-WF10X/22 mm
Nosepiece:	Quintuple
Objectives:	Spring: 4X/0.10 (WD 30.5 mm), 10X/0.25 (WD 17.4 mm), 40X/0.65 (WD 0.6 mm), Spring/oil: 100X/1.25 (WD 0.16 mm)
Interpupillary distance:	48 ... 75 mm
Condenser:	N.A. 0.90/1.25 Abbe condenser
Illumination:	3 W LEDs/30 W Halogen
Focusing stroke:	25 mm
Dimensions Stage (W x D):	185 x 145 mm
Dimensions (W x D x H):	210 x 282 x 394 mm
Netweight:	8.4 kg
Power supply:	110 ... 240 V, 50/60 Hz

Light microscopes Panthera CC

With USB 2.0 port for external camera power supply.

Motic

Scope of supply: Microscope, rubber eyecups, blue filter, LED and halogen modul, immersion oil (5 ml), allen key, dust cover, power cord

Type	Description	PK	Cat. No.
Panthera CC	Binocular	1	**4.668 673** 1
Panthera CC	Trinocular	1	**4.668 674**

2 Light microscope Panthera DL

2

Motic

Digitale microscope with integrated Wi-Fi camera for wireless image transfer to tablet or smartphone via the MotiConnect app or integration into a network via Ethernet.

- Ethernet and Wi-Fi
- Live image in FullHD
- Saved image with 4 MP

Scope of supply: Microscope, software Motic Images Plus 3.0 for Windows, OSX and Linux, MotiConnect App for iOS and Android, rubber eyecups, blue filter, LED and halogen modul, immersion oil (5 ml), allen key, dust cover, power cord

Sensor type:	CMOS
Sensor size:	1/3"
Resolution:	4 MP (2592 x 1520)
Live resolution:	1280 x 720, 1920 x 1080

Type	Description	PK	Cat. No.
Panthera DL	Digital binocular	1	**4.668 716**

1

9.727 031

Inverted Routine microscope for live cell inspection, AE2000

Classic cell culture microscope for daily work in the laboratory. *Motic*

- Infinity Optics [CCIS®]
- Observation Tube Siedentopf Type, Binocular -/Phototube 45°, F.N. 20
- Interpupillary Distance 48 mm-75 mm
- Eyepieces High-Eyepoint N-WF 10x/20 mm provide dioptre adjustment for both eyes
- Side facing quadruple nosepiece
- Objectives CCIS Plan Achromat PL 4x, LWD PL 40x
- CCIS Plan Achromat Phase PL Ph10x, LWD PL Ph20x
- Plain stage 200 mm x 239 mm surface with metal & glass stage inserts
- Condensor ELWD N.A. 0.3 with phase slider (Ph1, BF)
- Illumination 6V/30W halogen with intensity control and sleeping mode
- Universal power supply 100 V-240 V (CE)
- Ø 45mm blue, green interference and neutral density filters with filter slider, centering telescope, power cord, Allen hexagonal key, vinyl dust cover.
- Interchangeable LED module available

Optional: phase-contrast 4x/40x, mechanical stage with well plate holder.

Type	Description	PK	Cat. No.
AE2000	Binocular	1	**9.727 030**
AE2000	Trinocular	1	**9.727 031** 1

2

6.268 478

Inverted Microscope for advanced applications AE31E

Professional inverted research microscope for a wide range of applications. *Motic*

- Infinity Optics [CCIS®]
- Observation Tube Siedentopf Type, Binocular -/Phototube 45°, F.N. 22
- Interpupillary Distance 48-75mm
- Eyepieces High-Eyepoint N-WF 10x/22mm with diopter adjustment on both eyepieces
- Side facing quintuple nosepiece
- Objectives CCIS Plan achromat PL 4x,
- CCIS Plan Achromat Phase PL Ph10x, LWD PL Ph20x, LWD PL Ph40x
- Plain stage 200 mm x 239 mm surface with metal & glass stage inserts
- Condensor ELWD N.A. 0.3 with phase slider (Ph1, BF)
- Illumination: Externally mounted lamp house, Koehler 6V/30W Quartz halogen with intensity control
- Universal power supply 100 V-240 V (CE)
- Ø 45 mm blue, green interference and ground glass filters, centering telescope, power cord, Allen hexagonal key, vinyl dust cover
- Interchangeable LED module available

Optional available: mechanical stage with well plate holder, Epi-Fluorescence

Type	Description	PK	Cat. No.
AE31E	Binocular	1	**6.268 477**
AE31E	Trinocular	1	**6.268 478** 2

3

3 C-Mount camera adapter to BA & AE series

Motic

Description	PK	Cat. No.
Adapter C-Mount 0,5x	1	**7.626 193**
Adapter C-Mount 0,35x	1	**6.274 030**
Adapter C-Mount 0,65x	1	**6.243 486**

E & OE.

1 Light Microscopes Educational-Line OBT

NEW

1

The fully equipped all-round compound microscope for school, training and laboratories. *Kern & Sohn*

- Monocular and Binocular
- Widefield Eyepiece: WF 10x/18 mm
- Diopter adjustment one-sided (for binocular models)
- Coarse and fine focussing on both sides
- OBT 101: simple 0.65 condenser lens with adjustable aperture diaphragm, triple nosepiece
- OBT 102 - 106: ABBE 1.25 condensor focussed with aperture diaphragm, quadruple nosepiece
- Dimmable 1 W LED illumination
- Dust Cover and manual instruction included
- Different colour filters as accessoires availabl

Total dimension (W x D x H): 195 x 147 x 325 mm
Weight: 2.5 kg
Power supply: 230 V/50 Hz, battery (optional)

Type	Description	PK	Cat. No.
OBT 103	Monocular, achromatic objective 4x, 10x, 40x	1	**4.670 975**
OBT 104	Binocular, achromatic objective 4x, 10x, 40x	1	**4.670 976**
OBT 105	Monocular, achromatic objective 4x, 10x, 40x, 100x	1	**4.670 977**
OBT 106	Binocular, achromatic objective 4x, 10x, 40x, 100x	1	**4.670 978**

2 3 Light Microscopes Educational-Line OBE 12/13

NEW

The fully equipped all-round compound microscope for school, training and laboratories. *Kern & Sohn*

- Monocular (OBE 121, 131): Tube 30° inclined
- Binocular (OBE 122, OBE 132): Tube Butterfly 30° inclined, 360° rotatable
- Trinocular (OBE 124, 134): Tube Butterfly 30° inclined, 360° rotatable
- Widefield Eyepiece: WF 10x/18 mm
- Diopter adjustment at bino- and trinocular Version available (at one eyepiece tube)
- Quadruple nosepiece
- Coaxial pre-and fine focussing
- ABBE 1.25 condensor focussed with aperture diaphragm
- Dimmable 3 W LED illumination
- Storage compartment on the rear side
- USB connection (only as power source)
- Dust Cover, eyepiece rubber caps and manual instruction included
- Different colour filters as accessoires available

Total dimension (W x D x H): 360 x 150 x 320 mm
Weight: 4.6 kg
Power supply: 230 V/50 Hz, external power bank via USB

Type	Description	PK	Cat. No.
OBE 121	Monocular, achromatic objective 4x, 10x, 40x	1	**4.670 979**
OBE 122	Binocular, achromatic objective 4x, 10x, 40x	1	**4.670 980**
OBE 124	Trinocular, achromatic objective 4x, 10x, 40x	1	**4.670 981**
OBE 131	Monocular, achromatic objective 4x, 10x, 40x, 100x (oil immersion)	1	**4.670 982**
OBE 132	Binocular, achromatic objective 4x, 10x, 40x, 100x (oil immersion)	1	**4.670 983**
OBE 134	Trinocular, achromatic objective 4x, 10x, 40x, 100x (oil immersion)	1	**4.670 984**

2

3

Light Microscopes Lab-Line OBL

Kern & Sohn

The flexible laboratory assistant with infinity optical system and fixed, pre-centred Koehler illumination.

- Tube 30° inclined , 360° rotatable
- Widefield eyepiece: WF 10x/20 mm
- Diopter adjustment at one eyepiece tube
- Quadruple nosepiece (backward inclined)
- Objectives 4x, 10x, 40x, 100x (Oil immersion), (different Quality objectives in different series)
- Infinity Optical System and Infinity corrected lenses
- Objective quality: Infinity E-Plan
- Coaxial pre-and fine focussing
- ABBE 1.25 N.A. condensor with aperture diaphragm, focusable and pre-centered koehler illumination
- Lightfield diaphragm
- Available with 20 W Halogen or 3 W LED illumination
- Available as phase contrast microscope (OBL 145 und OBL 155) or individuell phase contrast units.
- Dust cover, eyepiece rubber caps and manual instruction included
- Additional eyepiece and filters available as accessoires

1

1 Light Microscopes Lab-Line OBL

NEW

Kern & Sohn

- Binocular Tube (OBL 125, OBL 127, OBL 145)
- Trinocular Tube (OBL 135, OBL 137, OBL 155)
- OBL 145 and OBL 155 are equipped with 4x/100x Infinity E-Plan objective for brightfield and 10x/40x Infinity Plan Phase Contrast objective

Type	Description	Lighting	PK	Cat. No.
OBL 125	Binocular	6 V/20 W Halogen	1	**4.657 658**
OBL 127	Binocular	3 W-LED	1	**4.657 659**
OBL 135	Trinocular	6 V/20 W Halogen	1	**4.657 660**
OBL 137	Trinocular	3 W-LED	1	**4.657 661**
OBL 145	Binocular, 10x/40x Plan PH	6 V/20 W Halogen	1	**6.285 897**
OBL 155	Trinocular, 10x/40x Plan PH	6 V/20 W Halogen	1	**6.285 898**

Light Microscopes Lab-Line OBL sets

NEW

Kern & Sohn

The sets are the complete digital solution for live investigations. Optionally available with an adapted tablet or C-mount camera, including appropriate C-mount adapter. The adapted tablet-camera has been specially developed for simple, convenient and direct investigation of the sample on the screen.

- Trinocular Tube
- 3W-LED illumination (transmitted light)

Type	Description	PK	Cat. No.
OBL 137C825	Incl. 5 mpx camera, with USB 2.0 interface and C-Mount adapter	1	**6.313 869** 2
OBL 137C832	Incl. 5 mpx camera, with USB 3.0 interface and C-Mount adapter	1	**4.670 985**
OBL 137T241	Incl. 5 mpx tablet-camera, with WLAN, USB 2.0 interface, HDMI, SD	1	**6.313 870** 3

2

6.313 869

3

6.313 870

Accessories for Light Microscopes Educational-Line OBE and Lab-Line OBL

Kern & Sohn

Further eyepieces, phase contrast units and filters available on request. Complete fluorescence units for OBL series available on request.

Description	For	PK	Cat. No.
C-Mount Adapter: 0.5x with adjustable focus	OBE	1	**6.285 913**
C-Mount Adapter: 0.5x with adjustable focus	OBL, OCM	1	**6.272 562**
Darkfield Unit: 4x-40x	OBE	1	**4.657 466**
Darkfield Condensor: 4x-40x	OBL	1	**6.285 901**
Objective: Plan 100x/1.0 (water/spring loaded) W.D. 0.18 mm	OBE	1	**6.285 900**
Objective: Infinity Plan 100x/1.15 (water/spring loaded) W.D. 0.18 mm	OBL	1	**6.286 318**

E & OE.

Compact Zoom Stereo Microscope with LED, SMZ-161 Series

Motic

Convincing optical performance combined with compact footprint and robust mechanics makes the SMZ-161 the ideal stereo microscope for teaching environments in High Schools and Universities.

SMZ-161-LED(R2LED)
- Greenough zoom optical system
- Fixed optical split 50:50
- Widefield eyepieces WF10X/20 mm, incl. rubber eyecups
- Diopter adjustment on both eyepiece tubes
- 6:1 Zoom ratio, WD=110 mm
- Objective magnification range: 0.75X-4.5X
- R2LED: Compact incident/transmitted illumination stand
- Coarse focusing system with tension adjustment
- 3W incident and transmitted LED illumination with intensity control
- Main supply 100 V-240 V (CE)
- Black/White and frosted glass stage plates and dust cover

Type	Description	PK	Cat. No.
SMZ-161-BLED (R2LED)	Binocular	1	**6.266 908** 1
SMZ-161-TLED (R2LED)	Trinocular	1	**7.658 531**

1

6.266 908

High-performance Greenough Stereo Microscope with LED, SMZ-171 Serie

Motic

Versatile Stereo microscope for a wide range of biological and material science applications.

- Improved image contrast due to multi-layer lens coating
- ESD compatible set ups available
- Various accessories available
- Observation Tube Binocular -/Phototube 45°, 360° rotating, F.N. 23
- Fixed optical split 50:50
- Widefield adjustable eyepieces WF10X/23 mm, incl. eyecups
- 6.7:1 Zoom ratio, WD=110 mm
- Objective magnification range: 0.75X-5X
- SMZ-171 Pole type stand with large working area and head holder
- Coarse focusing system with tension adjustment
- 3W incident and transmitted LED illumination with independent intensity controls
- Transmitted light with tilting reflector (oblique illumination)
- Option to adapt flexible light guide
- Main supply 100 V-240 V (CE)
- Black/White and frosted glass stage plates, and dust cover

2

7.671 016

Type	Description	PK	Cat. No.
SMZ-171-BLED	Binocular	1	**6.264 087**
SMZ-171-TLED	Trinocular	1	**7.671 016** 2

3 C-Mount Camera Adapter for SMZ 161/171 series

Motic

3

Description	PK	Cat. No.
adapter C-Mount 0,5x	1	**7.626 193**
adapter C-Mount 0,65x	1	**6.243 486**

1

Greenough-Stereomicroscope Educational-Line OSE

NEW

Ideal for workshops, schools and training. *Kern & Sohn*

- Tube 45° inclined
- WF 10×/ Ø 20 mm
- Diopter adjustment: Both-sided
- Illumination 1 W LED incident and transmitted
- Integrated handle and arm curved stand

Total dimension (W x D x H): 230 x 130 x 300 mm
Weight: 2.0 kg
Power supply: 230 V/50 Hz, battery

Type	Description	Magnification	PK	Cat. No.
OSE 421	Binocular	2x / 4x	1	**4.666 529** 1
OSE 422	Binocular, rechargeable batteries included	2x / 4x	1	**4.666 530**

2

6.286 167

Greenough Stereo Microscopes Lab-Line OZL

The flexible all-rounder with zoom function for schools, training companies, inspection authorities and laboratories. *Kern & Sohn*

- Tube 45° inclined
- Wide Field WF 10x/20 mm
- Diopter adjustment: Both-sided
- Illumination: 3 W-LED Incident and 3 W-LED transmitted, seperately dimmable
- Interpupillary distance 55 to 75 mm
- Large selection of eyepieces, external illumination units as well as auxiliary objectives are available as accessories
- Protective dust cover, eye piece rubber caps, as well as multi-lingual user instructions included in the scope of delivery

Type	Description	Magnification	PK	Cat. No.
OZL 463	Binocular	7x ... 45x	1	**6.286 167** 2
OZL 464	Trinocular	7x ... 45x	1	**6.286 168**

Accessories for Greenough Stereo Microscopes Lab-Line OZL 463/OZL 464

Kern & Sohn

Type	PK	Cat. No.
C-Mount Adapter 0.5x	1	**4.657 806**
Auxiliary objective 0.5x	1	**6.285 902**
Auxiliary objective 1.5x	1	**6.285 903**
Auxiliary objective 2.0x	1	**6.285 904**

3

3 Wi-Fi Microscope Camera Moticam X3

Wireless transfer of microscope images in full HD to smartphones or tablets. Connect mobile devices with the Wi-Fi signal of the camera and up to 6 users are ready to capture, edit and save pictures with the free App MotiConnect. *Motic*

- Data transfer Wi-Fi (2.4 or 5 GHz) and Ethernet (RJ45)
- Operating System Microsoft Windows XP/Vista/7/8/MAC OSX/Android 4.0 or higher/iOS7 or higher
- External Power Supply (12 V)

Scope of supply: CS Ring Adaptor, Focusable Lens, 30 mm and 38 mm Eyepiece Adapters, USB 2.0 Cable, Calibration Slide, Macro Tube, Motic Images Plus 3.0 for PC/OSX/Linux

Type	Resolution	Sensor format	PK	Cat. No.
Moticam X3	4 MP (1920 x 1080 px or 1280 x 720 px)	1/3" CMOS	1	**4.662 164**

4

4 Microscope Camera MOTICAM S

NEW

The next generation of Moticams offers solutions for a wide variety of applications in digital microscopy. Compact and robust, equipped with high-quality sCMOS sensors with many different resolutions and fast USB 3.1 connection. *Motic*

Type	Resolution	Sensor format	PK	Cat. No.
MOTICAM S1	1,2MP (max. 1280 x 950 px)	1/3" sCMOS	1	**4.672 118**
MOTICAM S3	3MP (max. 2448 x 1536 px)	1/2.8" sCMOS	1	**4.672 119**
MOTICAM S6	6MP (max. 3072 x 2048 px)	1/1.8" sCMOS	1	**4.672 120**
MOTICAM Pro S5 Lite	5MP (max. 2448 x 2048 px)	2/3" sCMOS	1	**4.672 121**

E & OE.

1 2 Microscope Camera Moticam 1080

Motic

A multi-output camera with Full-HD resolution. This multifunctional camera with integrated software offers a new quality for interactive microscopy in educational, laboratory and industrial environments and allows working without additional computer. The HDMI signal delivers a fast live image with 1080 (60P) resolution and high color fidelity. Still images and videos are stored either at 2 MP or 8 MP format on MicroSD card. Especially for the visualisation of fast, moving samples in biology and industry 60 full frames per second are ideal system preconditions. The on-board software is controlled via WiFi mouse. As an alternative, the USB port of the camera can be used, also simultaneously to the HDMI port, to run the camera with the new Motic Images Plus 3.0 software with all its measuring tools.
A HDMI video projector allows to present the impressive live image to a greater public.
The delivery package includes the software Motic Images Plus 3.0, calibration slide, eyepiece adapters as well as macro tube with focusable lens.

1

2

Type	Resolution	Sensor format	PK	Cat. No.
Moticam 1080	2.0/8 MP	1/2.8"CMOS	1	**6.282 488**

C-Mount camera adapter please see page 1100.

3 Digital CMOS Microscope Cameras ODC

Kern & Sohn

Specialists in microscopy for measurement, counting, documentation, archiving and image processing.

- C-Mount USB-camera with CMOS sensor
- USB-cable, eyepiece adapter and calibration slide included
- Kern-Microscope-VIS Software in 6 languages inclusive, for WINDOWS XP and higher

3

Type	Resolution	Sensor format	Interface	PK	Cat. No.
ODC 824	3,1 MP	1/2" CMOS	USB 2.0	1	**6.285 783**
ODC 825	5,1 MP	1/2.5" CMOS	USB 2.0	1	**6.285 906**
ODC 831	3,1 MP	1/3" CMOS	USB 3.0	1	**6.285 907**
ODC 832	5,1 MP	1/2.5" CMOS	USB 3.0	1	**6.285 908**

USB Hand held microscopes for schools and education

Dino-Lite

The Dino-Lite microscopes are available for teachers and students for all levels of education. They are suitable for use in science teaching for detailed examination e.g. of insects, plants, minerals, fossils and mechanical and electrical components.

- USB 2.0, 30 fps
- VGA (640 x 480) or 1.3 MP image resolution
- WF4115ZT with WLAN streamer
- Incl. Dino-Lite software, for AM4113T and WF4115ZT the software also includes measurement functions
- Warranty: 2 years

Scope of supply: Carrying pouch, Software CD for Windows and Mac OS, calibration sheet for AM4113T and WF4115ZT, manual

4

6.285 940

5

4.668 457

Type	Resolution	Magnification	Lighting	PK	Cat. No.
AM2111	640 x 480 pixels	10x ... 70x, 200x	4 x LED, white	1	**6.285 940** 4
AM4113T	1.3 MP	10x ... 70x, 200x	8 x LED, white	1	**6.285 920**
WF4115ZT	1,3 MP	20x ... 220x	8 x LED, white	1	**4.668 457** 5

Accessories for USB Hand held microscopes for schools and education

Dino-Lite

Description	PK	Cat. No.
Table stand with vertical orientation	1	**4.675 298** 6
Table stand with 30° inclinable pole feature	1	**4.675 299**
WIFI Streamer for AM4113T	1	**6.285 946** 7

6

4.675 298

7

6.285 946

More manual microscopes please see chapters 13.

1

6.285 935

USB Hand held fluorescence microscopes

Dino-Lite

The Dino-Lite fluorescence microscopes are considered the smallest fluorescence microscopes. They are flexible, compact, user-friendly and economical.
With excitation LEDs from 400 to 620 nm, they are suitable for viewing a wide range of luminophores for applications in biology, pathology and anatomy.

- USB 2.0, 30 fps
- 1.3 megapixel (1280x1024) image resolution
- Light source switchable from fluorescent LEDs to a white LED for localisation and focusation of the object
- Long-pass emission filter
- Guarantee: 2 years

Scope of supply: Carrying pouch, Software CD for Windows and Mac OS, calibration slide, manual

Type	Resolution	Magnification	Lighting	Fluorophore	PK	Cat. No.
AM4115T-CFVW	1.3 MP	20x-220x	400 nm excitation, 430 nm emission	DAPI	1	**6.285 935** 1
AM4115T-GFBW	1.3 MP	20x-220x	480 nm excitation, 510 nm emission	GFP, FITC	1	**6.285 936**
AM4115T-YFGW	1.3 MP	20x-220x	525 nm excitation, 570 nm emission	Cy3, TRITC	1	**6.285 937**
AM4115T-RFYW	1.3 MP	20x-220x	575 nm excitation, 610 nm emission	TxRED, mCherry	1	**6.285 938**
AM4115T-DFRW	1.3 MP	20x-220x	620 nm excitation, 650 nm emission	Cy5	1	**6.285 939**

2

4.661 946

USB Hand held microscopes Dino-lite Edge 3.0

Dino-Lite

The Dino-lite Edge 3.0 high-speed series with its USB 3.0 connection offers uncompressed transmission of images with high resolution and color accuracy.
It achieves a maximum speed of 45 fps. The built-in polarizing filter make this models ideal for working with shiny or reflective objects such as metal, plastic, glass, jewelry, electronics, etc.
Special features such as Automated Magnification Reading (AMR) for making easy and accurate measurements or Extended Depth of Field (EDOF) for combining a series of images with different focus levels, are available on selected models.

3

4.661 952

- USB 3.0, maximum 45 fps
- 5 Megapixel Edge sensor
- Extended Depth of Field (EDOF)
- Extended Dynamic Range (EDR)
- Automatic Magnification Reading (AMR)
- Adjustable Polariser
- Flexible-LED-Control (FLC)

Scope of supply: Carry pouch, USB cable, Software for Windows and Mac OS (not for EDOF, EDR models), open and closed cap, diffuser and side light cap, extension and long cap, calibration slide and manual.

Type	Resolution	Magnification	Lighting	Max. Working Distance mm	PK	Cat. No.
AM73115MZT (FLC)	5 MP	20x ... 220x	LED, white	60	1	**4.661 946** 2
AM73115MZTL (FLC)	5 MP	10x ... 140x	LED, white	235	1	**4.661 947**
AM73115MTF (FLC)	5 MP	10x ... 70x	LED, white	480	1	**4.661 948**
AM73515MZT (AMR, FLC)	5 MP	20x ... 220x	LED, white	60	1	**4.661 949**
AM73515MZTL (AMR, FLC)	5 MP	10x ... 140x	LED, white	235	1	**4.661 950**
AM73915MZT (EDOF, EDR, AMR, FLC)	5 MP	10x ... 220x	LED, white	235	1	**4.661 951**
AM73915MZTL (EDOF, EDR, AMR, FLC)	5 MP	10x ... 140x	LED, white	235	1	**4.661 952** 3

4

6.285 944

5

6.275 263

Accessories for USB Hand held microscopes

Dino-Lite

Description	PK	Cat. No.
Table top stand with quick-release incl. extension arm	1	**6.285 944** 4
Metal stand, vertical and horizontal positioning	1	**6.275 263** 5

E & OE.

1 Immersion oil

Motic

Type	PK	Cat. No.
Immersion oil, 5 ml	1	**6.283 838**

1

2 Microscope Cleaning Kit

Content: 1 power blower, cotton swabs, cleaning liquid, cleaning cloth, lens cleaning paper, retractable brush

Motic

Type	PK	Cat. No.
Mikroscope Cleaning Kit	1	**6.280 087**

2

3 Drying pads Grade 556Z

For retaining specimen visibility (50 sheets).

Whatman

Width mm	Length mm	PK	Cat. No.
37	100	1	**9.069 003**

3

4 Lens Tissue Paper

Special paper for cleaning optical glass
Packing: 500 pieces/dispenser box

Hecht

Type	Dimensions mm	PK	Cat. No.
Lens tissue paper	90 x 72	500	**6.050 595**

4

5 6 Lens cleaning tissues, 105 series

For the safe removal of surface moisture and grease from lenses and other optical surfaces. Chemically pure and free from silicones and other additives.

Whatman

Width mm	Length mm	PK	Cat. No.
100	150	625	**9.056 887**
200	300	100	**9.056 888**

5

6

1

6.272 060

Liquid Dispenser, ESD

Ideal-tek

Ideal for a wide range of applications in chemistry and medical laboratories.
Made of antistatic HDPE with Teflon tube inside, for a great chemical resistance, ESD-safe.
With hinged lid. Just touch the dispensing dish with a brush, cloth or other applicator and solvent is brought to the surface the instant it is needed. Stainless steel valves seal contents in bottle until used, preventing spills, dripping and escaping fumes from endangering the user.
Fluid pumped into the dish does not drip back into the bottle, keeping stored liquids uncontaminated.

Capacity ml	Description	PK	Cat. No.
120	Fluid dispenser	1	**4.666 353**
120	Anti-splash fluid dispenser	1	**4.666 354**
180	Anti-splash fluid dispenser	1	**6.272 060** 1

2

2 Hand Wrap ASPURE, glass

AS ONE

- Lid: PP
- Pumps: brass, lid nickel plating
- Tube: PTFE
- Easy liquid dispense by pressure on the metal head
- Economical dosing
- No evaporation

Type	Capacity ml	Diam. mm	Height mm	PK	Cat. No.
200	170	85	108	1	**4.663 665**
500	280	85	140	1	**4.663 666**

3

3 Canada balsam bottle

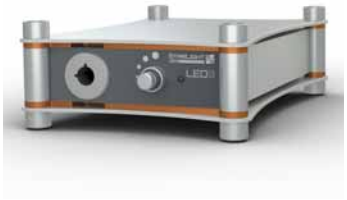
Goldschmidt pattern. Clear glass. For microscopy examinations.
Ground joint maximises useful life of contents.

Capacity g	PK	Cat. No.
30	1	**6.070 616**
60	1	**6.053 546**

1 LED cold light sources LED3

Titanium-grey. The fan-less Led light sources are an energy saving replacement for conventional 150 W halogen cold light sources. The passive cooling system enables a noiseless and vibration-free operation. Data for the lumen refer to the measurement at the end of a flexible, 1-arm fiber optic light guide with active diameter Ø 9 mm and length 1000 mm. *Starlight Opto-Electronics*

1



- Adaptable to various light guides
- Flicker-free lighting
- Solid aluminium housing
- Stackable and horizontal positionable

Scope of delivery: LED cold light source LED3, multi adapter power supply (EU, UK, US), user manual

Specifications

Illuminant:	30 W
Operation time:	50000 h
Brightness control:	0 - 100 %
Light guide access:	15 mm
Dimensions (W x D x H):	174 x 259 x 81 mm
Weight:	3.7 kg
Power supply:	100 ... 240 V AC, 50/60 Hz

Type	Colour temperature K	Light flux lm	Plug type	PK	Cat. No.
LED3-P, CRI 70	5700	730	EU, UK, US	1	**4.668 033**
LED3-PC, CRI 90	5700	590	EU, UK, US	1	**4.668 034**
LED3-N, CRI 80	4000	630	EU, UK, US	1	**4.668 035**
LED3-W, CRI 80	3000	630	EU, UK, US	1	**4.668 036**

Semi-rigid light guides, GLS1/GLS2/GLS3

The semi-rigid light guides are available in versions of 1-arm, 2-arms and 3-arms. *Starlight Opto-Electronics*

2

4.668 060

- High flexibility and luminous efficiency
- Very good transmission
- Spot illumination
- Low heat generation
- For halogen and LED cold light sources
- Adaptable to cold light sources from all manufacturers

Type	Description	Material	Colour	PK	Cat. No.
GLS1	1-armed, arm length 450 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 057**
GLS1	1-armed, arm length 600 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 058**
GLS1	1-armed, arm length 800 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 059**
GLS2	2-armed, arm length 400 mm, active Ø 3.2 mm	Steel / brass	silver	1	**4.668 060** 2
GLS2	2-armed, arm length 450 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 061**
GLS2	2-armed, arm length 600 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 062**
GLS2	2-armed, arm length 800 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 063**
GLS2	2-armed, arm length 600+800 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 064**
GLS3	3-armed, arm length 450 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 065**
GLS3	3-armed, arm length 600 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 066**
GLS3	3-armed, arm length 800 mm, active Ø 4.5 mm	Steel / brass	black	1	**4.668 067**

Further accessories can be found in our online shop.

Fiber optical ring lights SRL3/SRL6

Black. The fiber optical ring lights offer high flexibility and luminous efficiency. *Starlight Opto-Electronics*

3

4.668 046

- Very good transmission
- Low heat generation
- For halogen and LED cold light sources
- Adaptable to cold light sources from all manufacturers

Specifications	SRL3 // SRL6
Working distance:	20 ... 150 mm // 35 ... 150 mm
Active diameter:	6.4 mm // 9 mm
Height:	26 mm // 25 mm
Outer diameter:	58 mm // 92 mm
Clamping diameter:	30.5 mm // 66 mm
Material:	Anodized aluminium
Material tube:	Steel spiral, PVC

Type	PK	Cat. No.
SRL3	1	**4.668 045**
SRL6	1	**4.668 046** 3

1

4.668 075

2 LED incident lamps IL1/IL1-Lab

Starlight Opto-Electronics

Black. The modul-LED® concept allows a quick change of the light source.
For use in industry and science. The LED incident lamps are available in versions of 1-arm, 2-arms and with screw caps and borosilicate protective glass.
The modules must be ordered separately.

- Brightness control with memory function
- Flexible illumination thanks to semi-rigid arms
- Flicker-free lighting for photographics and video
- Solid aluminium housing

Scope of delivery: LED incident lamp IL1, multi adapter power supply (EU, UK, US), user manual

Specifications

Illuminant:	3 W LED Module 21 mm
Brightness control:	0 - 100 %
Fixing rod Ø:	12 mm
Dimensions control unit (W × D × H):	40 × 80 × 37 mm
Power supply:	100 ... 240 V AC, 50/60 Hz

2

Type	Description	Weight kg	Plug type	PK	Cat. No.
IL1-Lab	1-arm, arm length 450 mm	0.5	EU, UK, US	1	**4.668 073**
IL1-Lab	1-arm, arm length 600 mm	0.5	EU, UK, US	1	**4.668 074**
IL1-Lab	2-arms, arm length 450 mm	0.7	EU, UK, US	1	**4.668 075** 1
IL1-Lab	2-arms, arm length 600 mm	0.7	EU, UK, US	1	**4.668 076**
IL1*	1-arm, arm length 450 mm	0.5	EU, UK, US	1	**4.668 077**
IL1*	1-arm, arm length 600 mm	0.5	EU, UK, US	1	**4.668 078**
IL1*	2-arms, arm length 450 mm	0.8	EU, UK, US	1	**4.668 079**
IL1*	2-arms, arm length 600 mm	0.8	EU, UK, US	1	**4.668 080**

* With screw caps and borosilicate protective glass

3

3 LED-Modules

Starlight Opto-Electronics

21 mm. Available in different colours, beam angles and UV versions.

Description	Colour	Colour temperature K	Shaft length mm	PK	Cat. No.
Spot (10°)	pure white	6000		1	**4.668 085**
Spot (10°)	natural white	4000		1	**4.668 086**
Spot (10°)	warm white	3000		1	**4.668 087**
Spot (10°)	red		625	1	**4.668 088**
Spot (10°)	green		528	1	**4.668 089**
Spot (10°)	blue		470	1	**4.668 090**
Spot (10°)	amber		590	1	**4.668 091**
Flood (28°)	pure white	6000		1	**4.668 092**
Flood (28°)	natural white	4000		1	**4.668 093**
Flood (28°)	warm white	3000		1	**4.668 094**
Flood (28°)	red		625	1	**4.668 095**
Flood (28°)	green		528	1	**4.668 096**
Flood (28°)	blue		470	1	**4.668 097**
Flood (28°)	amber		590	1	**4.668 098**
Diffuse (40°)	pure white	6000		1	**4.668 099**
Diffuse (40°)	natural white	4000		1	**4.668 100**
Diffuse (40°)	warm white	3000		1	**4.668 101**
Diffuse (40°)	red		625	1	**4.668 102**
Diffuse (40°)	green		528	1	**4.668 103**
Diffuse (40°)	blue		470	1	**4.668 104**
Diffuse (40°)	amber		590	1	**4.668 105**
Line (12° x 30°)	pure white	6000		1	**4.668 106**
Line (12° x 30°)	natural white	4000		1	**4.668 107**
Line (12° x 30°)	warm white	3000		1	**4.668 108**
Line (12° x 30°)	red		625	1	**4.668 109**
Line (12° x 30°)	green		528	1	**4.668 110**
Line (12° x 30°)	blue		470	1	**4.668 111**
Line (12° x 30°)	amber		590	1	**4.668 112**
Reflektor (80°)	UV		365	1	**4.668 113**
Reflektor (80°)	UV		405	1	**4.668 114**

Suitable accessories can be found in our online shop.

E & OE.

Cold Light Sources

SCHOTT

For sample illumination in microscopy, clinical diagnostics, dental technology, photography or mineralogy. Cold light sources filter out heat-producing, infra-red radiation and offer significantly higher intensities at magnifications over 30x magnification. Compact, easy to use and maintenance-free. KL 300 LED without fan otherwise with a low-noise fan with air vented at the rear of the casing.
Power supply: 100-240 V, 50/60 Hz

9.705 204

KL 300 LED - compact
Cost-effective LED light source with easy handling and continuous dimming. Convection cooling for silent and vibration-free operation. Max. light intensity: 80 lm. Incl. wide-range power supply with international plug system.
Adapter or stand-alone stand sold separately.

KL 1600 LED - economy
Standard LED light source with continuous dimming, filter slider and multi-chip white light engine for a homogeneous illumination. Max. lighting intensity: 680 lm. Incl. wide-range power supply without cable.

KL 2500 LED - advanced
Professional LED light source, additionally, with extra-fine dimming option (0.1 % steps), LCD display for reproducible settings and USB-connectivity. Max. light intensity: 1100 lm. Incl. wide-range power supply and USB connection cable, without power cable. Footswitch optional.

KL 1500 HAL - natural colour
150 W halogen light source with continuous dimming and full halogen spectrum (colour rendering index CRI=100) for natural colour reproduction. Colour temperature indication on integrated LCD display.
Maximum lighting intensity: 600 lm. Incl. wide-range power supply without cable.

Please order Fibre optic ring light or gooseneck light guide separately.
Please order a country-specific power cable for KL 1600 LED, KL 2500 LED and KL 1500 HAL separately.

Type	Width mm	Depth mm	Height mm	Colour temperature K	Light flux lm	PK	Cat. No.
KL 300 LED	106	114	61	5600	80	1	**6.253 748**
KL 1600 LED	114	231	137	5600	680	1	**9.705 206**
KL 2500 LED	114	231	137	5600	1100	1	**9.705 204** 1
KL 1500 HAL	200	286	147	1950 - 3400	600	1	**6.269 725**

2 Cold Light Source KL 1600 LED Packages

SCHOTT

The KL 1600 LED is an innovative fiber optic light source which uses cold light to illuminate all types of objects in industrial and life science applications.

- Powerful illumination system with a brightness of 680 lm
- Ergonomically placed dimming control
- Ripple free illumination for digital imaging applications
- Colour temperature of 5.600 K does not change when the light source is dimmed
- Maintenance free due to long lifetime LEDs of 50.000 hours

Scope of supply:
LED Cold light source KL 1600 LED incl. 2-armed gooseneck light guide, 2 focus lenses and according power cord

Specifications

Colour temperature:	5600 K
Light flux:	680 lm
Dimensions KL 1600 LED (W x D x H):	114 x 231 x 137 mm
Dimensions light guide (Ø x L):	4.5 x 600 mm
Weight:	3.9 kg
Power supply:	100 ... 240 V, 50/60 Hz

Type	Plug type	PK	Cat. No.
KL 1600 LED Package	EU	1	**4.666 289**
KL 1600 LED Package	UK	1	**4.666 291**
KL 1600 LED Package	CH	1	**4.666 290**

LED Illumination, direct

SCHOTT

EasyLED Ringlight/EasyLED Ringlight Plus: Powerful and robust LED ring light with continuous dimming.
Ringlight Plus version with basic segment features and segment rotation. Easy and intuitive operation via integrated jog dial wheel.
Including wide input range power supply with world wide plug (clip system). External/internal diameter 114/66 mm.
If necessary, please order the necessary lens adapter separately.
EasyLED Spotlight Plus (Single/ Double): Advanced high power LED gooseneck system with integrated controller and continuous dimming.
With the Spotlight Plus Double, the two spots can also be activated individually. Including wide input range power supply with world wide plug (clip system).
Please order mounting bracket or column adapter separately (same adapter as for KL 300 LED).

Type	Description	Working Distance mm	Colour temperature K	Light flux lm	PK	Cat. No.	
Ringlight	no segments	75	5600	190	1	**6.258 176**	1
Ringlight Plus	8 segments	65	5600	250	1	**6.238 244**	
Spotlight Plus Single	single arm	10-90	5600	130	1	**6.266 980**	
Spotlight Plus Double	double arm, separately switchable	10-90	5600	2 x 130	1	**6.266 981**	2

1

6.258 176

2

6.266 981

3

6.275 481

4

6.275 482

LED ringlight illumination VisiLED Packages

SCHOTT

Answering the needs of the most specialised tasks, the modular VisiLED series is built on flexibility and quality. Molding the lighting setup to each application, a number of high performance ringlights in combination with the separate Controller MC 1100 enable high intensity illumination. Diffusors and polarizer sets, which are optional available, allow a combination of different techniques right at the point of examination.

- Homogeneous and shadow free illumination
- Segmentable, in 1/8 steps rotatable, different segment modes available
- Actively controlled LED temperature for a long lifetime of 50000 hours
- Package 1 is ideal for unrestricted work on object preparations and the use of revolving nosepiece due to a slim ring light design (AD 92 mm)
- Optionally available adapter rings for connecting the ring lights to all common Stereomicroscope lenses with diameters up to 66 mm

Scope of supply:
Package 1: Controller VisiLED MC 1100, power adapter, LED Ringlight S40-75
Package 2: Controller VisiLED MC 1100, power adapter, LED Ringlight S80-55

If applicable, order necessary lens adapter separately.
Please order a country specific power cable separately.

Type	Description	Colour temperature K	Working Distance mm	Light flux lm	PK	Cat. No.	
Package 1	40 LEDs in 8 segments	5600	85	260	1	**6.275 481**	3
Package 2	80 LEDs in 8 segments	5600	75	290	1	**6.275 482**	4

5

9.705 220

Gooseneck light guide for SCHOTT Cold light sources

SCHOTT

Flexible light guides which will remain in place after positioning.
Gooseneck branches positioned in opposite directions create near shadow-free illumination.

Description	For	PK	Cat. No.	
1-branch, diam. 3.5 mm, L 500 mm	KL 300 LED	1	**9.705 221**	
2-branch, diam. 3.5 mm, L 500 mm	KL 300 LED	1	**9.705 220**	5
1-branch, diam. 4.5 mm, L 600 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 151**	
2-branch, diam. 4.5 mm, L 600 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 152**	
3-branch, diam. 4.5 mm, L 600 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 153**	

Flexible light guide for SCHOTT Cold light sources

SCHOTT

1

9.705 226

Description	For	PK	Cat. No.
2-branch, PVC coated, diam. 4.0 mm, L 1000 mm	KL 300 LED	1	**9.705 226** 1
1-branch, PVC coated, diam. 4.5 mm, L 600 mm	KL 300 LED	1	**9.705 225**
2-branch, M-PVC coated, diam. 4.5 mm, L 1000 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 165**
2-branch, M-PVC coated, diam. 4.5 mm, L 1600 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 169**
3-branch, M-PVC coated, diam. 4.5 mm, L 1000 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 166**
1-branch, M-PVC coated, diam. 5.0 mm, L 1000 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**6.228 108**
1-branch, M-PVC coated, diam. 5.0 mm, L 1600 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 164**
1-branch, M-PVC coated, diam. 8.0 mm, L 1000 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 168**
1-branch, M-PVC coated, diam. 9.0 mm, L 1000 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**7.642 628**

Suitable accessories can be found in our online shop.

Flexible light guide for SCHOTT Cold light sources

For intensive, uniform and shadow-free illumination of samples.

SCHOTT

2

9.705 195

Description	For	PK	Cat. No.
6 point, int. diam. 66 mm	KL 300 LED	1	**9.705 230**
Annular, int. diam. 58 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 194**
Annular, int. diam. 66 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**9.705 195** 2
Annular, "slim", int. diam. 66 mm	KL 1500 HAL, KL 1600 LED, KL 2500 LED	1	**6.254 612**

Suitable accessories can be found in our online shop.

3 Clamps for Cold light source KL 300 LED and EasyLED Spotlight

SCHOTT

3

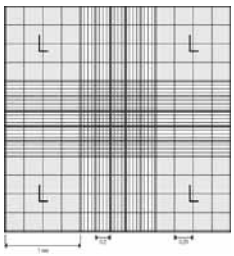
For	PK	Cat. No.
Ø 20 mm column	1	**6.274 401**
Ø 25 mm column	1	**7.910 430**
Ø 30 mm column	1	**4.666 071**
Ø 32 mm column	1	**6.237 972**
Ø 35 mm column	1	**4.666 072**
ZEISS stand K and stand M	1	**4.666 076**

We can supply this manufacturer's whole product range !

LLG Lab Logistics Group

SCHOTT glass made of ideas

1

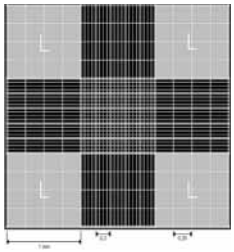


1 Counting chamber, Improved Neubauer

With double ruling. Calibratable. Cell depth 0.1mm. *BRAND*
Counting grid with 9 large squares each 1 mm². The 4 large squares in the corners for counting leucocytes are each subdivided into 16 squares with a side length of 0.25 mm. The large square in the middle is subdivided into 25 squares each with a side length of 0.2 mm. Each of these is further subdivided into 16 smaller squares each with a side length of 0.05 mm and an area of 0.0025 mm². The 5 group squares marked with an 'E' are used to count thrombocytes and erythrocytes. All group squares have triple boundary lines on each side.

Type	PK	Cat. No.
Without snap-on clips	1	**7.020 270**
With snap-on clips	1	**7.020 272**

2

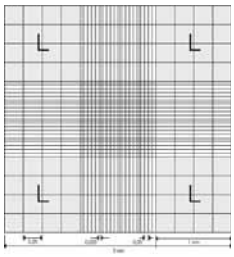


2 Counting chamber, Improved Neubauer, bright line

Bright line. With double ruling. Calibratable. Same counting grid as the Improved Neubauer cell, but with rhodium coated chamber base. Rulings are engraved into the Rhodium layer and appear bright under normal microscope settings. By altering the contrast it is possible to reverse the image under the microscope to make the rulings appear brighter or darker as required. *BRAND*

Description	PK	Cat. No.
Without snap-on clips	1	**7.020 271**

3

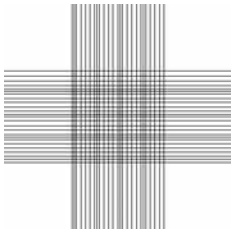


3 Counting chamber, Improved Neubauer

With double ruling. Calibratable. Cell depth 0.1 mm. Same ruling as Improved Neubauer, but the large square in the centre is divided into 16 squares each with a side length of 0.25 mm. Unlike the more modern Improved Neubauer counting chambers, the counting area of each group square is limited by the outermost of the triple border lines. *BRAND*

Description	PK	Cat. No.
without clamp	1	**7.020 277**
with clamp	1	**7.020 278**

4

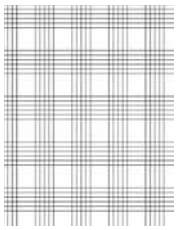


4 Counting chamber, Thoma

Double ruling. Without snap-on clips. Calibratable. Cell depth 0.1 mm. Grid is the same as the grid in the centre of large square in the Neubauer chamber. The area of the small square is 0.0025 mm². Since the large outer squares are not included, the Thoma system is only used to count thrombocytes and erythrocytes.

Description	PK	Cat. No.
double ruling, without clamp	1	**9.161 080**
double ruling, with clamp	1	**7.607 192**

5

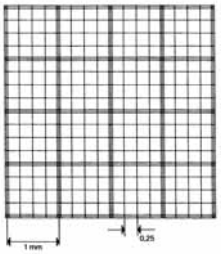


5 Counting Chamber, Malassez

BLAUBRAND®. Double ruling. Without snap-on clips. Cell depth 0.2 mm. *BRAND*
The ruling is rectangular, covering an area of 5 mm². The large rectangles measure 0.25 x 0.20 = 0.05 mm². They are each subdivided into 20 mini squares with an area of 0.0025 mm². This chamber is commonly used for counting cells in the cerebrospinal fluid, or for counting nematodes.
CE-marked according to IVD-Directive 98/79 EC.

Description	PK	Cat. No.
Without snap-on clips	1	**7.020 281**

6



6 Counting chamber, Fuchs-Rosenthal

With double ruling. Without snap-on clips. Calibratable. Cell depth 0.2 mm. Grid has 16 x large 1 mm² squares. Each square is divided into 16 smaller squares each with a side length of 0.25 mm and an area of 0.0625 mm². These counting chambers are commonly used to count cells in cerebrospinal fluid.

Description	PK	Cat. No.
double ruling, without clamp	1	**9.161 098**
double ruling, hell-linig, with clamp	1	**6.050 057**

E & OE.

1 Counting Chambers according to McMaster

Hecht

For veterinary medicine (e.g. helminth eggs counting) with 2 counting areas, cover glass with 2 counting grids glued on 3 supports.
Counting area: 10 x 10 x 0.5 mm.

Length mm	Width mm	PK	Cat. No.
76	32	1	**6.258 239**

1

2 3 Counting chambers C-Chip

NanoEn Tek Inc.

Disposable counting chamber made of optical plastic.
Dimensions: 25 x 75 mm, thickness 1.6 mm.
Various applications such as blood cell counting, cell concentration measurement, sperm counting, investigation of cell viability and bacteria and fungal spore counting.

- No need for coverslips
- Two chambers per chip
- Reduces the risk of infectious materials
- Quartz grade optical plastic
- Guaranteed repeatability and reliability
- Individually wrapped

2

3

Type	Depth mm	Capacity µl	PK	Cat. No.
according to Bürker	0.1	10	50	**4.668 325**
according to Bürker-Türk	0.1	10	50	**4.668 326**
according to Fuchs-Rosenthal	0.2	20	50	**4.668 324**
according to Malassez	0.2	20	50	**4.668 327**

4 Hand tally counter

Heathrow Scientific

Use for counting blood cells, bacterial colonies, drops of liquid, or any repetitive event. Tallies up to 9999. Features a quick-reset knob, lens window for easy reading, and finger ring for a secure grip. Sturdy, chrome-finished, metal housing.
Dimensions: 46 mm diameter x 41mm W.

Description	PK	Cat. No.
Hand tally counter	1	**6.237 971**

4

5 Economy Counters

Heathrow Scientific

Mechanical, benchtop counters are ideal for determining the number of cells, counting parts, etc. Use with blood cell labels provided or insert your own.
Each key records up to 999 count strokes. A totalising window keeps track of the total number of strokes made on all keys; a bell rings at every 100 total counts reached.

Description	Width mm	Length mm	Depth mm	PK	Cat. No.
6-key Economy Counter	76	250	56	1	**9.521 801**
9-key Economy Counter	76	320	56	1	**9.521 802**

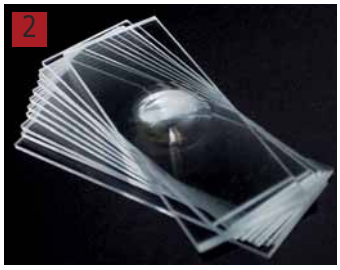
5

1 Microscope slides

According to ISO 8037/1. Prewashed and polished. Nominal thickness 1 mm.
Size 76 x 26 mm. Also available with 20 mm, frosted, writing patch at one end.

Menzel

Type	Description	Edge finish	PK	Cat. No.
Without frosted end	Extra white	Cut	50	**9.161 110**
With frosted end	Extra white	Cut	50	**9.161 145**
Without frosted end	Extra white	Ground 45°	50	**9.161 120**



2 Microscope slides with cavities

Dimensions: 76 mm x 26 mm x 1.2 mm to 1.5 mm,
with cavities approx. 15 mm to 18 mm diameter and approx. 0.6 to 0.8 depth.

Menzel

Colour	Edge finish	PK	Cat. No.
extra white glass	90° ground edges	1	**9.161 151**

3 Superfrost® slides

According to ISO 8037/1. With colour-coded writing patch as outlined below.
Size 76 mm x 26 mm. Nominal thickness 1.0 mm. With cut or ground edges.
An extensive color palette allows easy and clear identification and classification of different examination preparations.

Menzel

Colour	Edge finish	PK	Cat. No.
white	Cut	50	**9.161 161**
blue	Cut	50	**9.161 162**
pink	Cut	50	**9.161 163**
yellow	Cut	50	**9.161 164**
green	Cut	50	**9.161 165**
white	Ground 45°	50	**9.161 171**
blue	Ground 45°	50	**9.161 172**
pink	Ground 45°	50	**9.161 173**
yellow	Ground 45°	50	**9.161 174**
green	Ground 45°	50	**9.161 175**

4 Superfrost® Plus adhesive microscope slides

Size: 75 mm x 25 mm x 1.0 mm. Ground edges 90°, white SuperFrost marking area.
A new application method provides the surface of a slide with a permanent positive charge.
Electrostatic attraction binds fresh, frozen tissue sections and cytology preparations.
Also available with blue, yellow, pink or green SuperFrost marking area.

Menzel

Type	Colour	PK	Cat. No.
SuperFrost® Plus	white	72	**9.161 155**

Adhesive microscope slides Polysine™

75 x 25 x 1 mm. ground edges 90°, white marking area.
Polysine adhesion slides are electrostatically and biochemically adhesive.
The preparation is first adhered by electrostatic attraction and then fixed in place by biochemical binding.
Polysine adhesion slides are best suited for paraffin-embedded tissue slices from human sources fixed in formalin, alcohol or Bouin solution. For tissue slices 2-5 µm thick.

Menzel

Type	Colour	Edge finish	PK	Cat. No.
Polysine™	white	ground 90°	72	**6.055 100**

E & OE.

1 Diagnostic slides without adhesion coating

75 mm x 25 mm x 1.0 mm, with 90° ground edges. *Menzel*

Colour	Diam. mm	No. of chambers	Material	PK	Cat. No.
Blue	8.0	1	Epoxy	100	**9.161 181**
Black	14.0	3	Epoxy	100	**9.161 182**
Black	6.0	8	Epoxy	100	**9.161 183**
Black	6.7	10	Epoxy	100	**9.161 184**
White	5.0	12	Epoxy	100	**9.161 185**
Blue	8.0	1	PTFE	100	**9.161 186**
Black	14.0	3	PTFE	100	**9.161 187**
Black	6.0	8	PTFE	100	**9.161 188**
Black	6.7	10	PTFE	100	**9.161 189**
White	5.0	12	PTFE	100	**9.161 190**

2 LLG-Slide dispenser

Slide dispenser can dispense 91 slides, individually. By turning the knob, one slide is dispensed. Only dry slides should be inserted into the storage magazine. With transparent, removable upper section for easy viewing of remaining slides and clean storage. For microscope slides with dimensions 75 x 25 mm and 76 x 26 mm.

Type	PK	Cat. No.
Dispenser	1	**9.161 000**

3 Microscope slide or paper strip holder, PS

This slide holder has a sloped groove that accepts up to 10 single or double slides standing on end. Front ledge serves as a place to dry slides. Made of durable polystyrene. *Bel-Art Products*

Internal dimensions (W x D x H) mm	PK	Cat. No.
250 x 50 x 30	1	**9.161 208**

4 Slide Holders, PE

For microscope slides 76 x 26 mm. For storing, cleaning, drying microscope slides. *Heathrow Scientific*
Robust design with anti-slip rubber feet.
Temperature resistant in the range -50 to +80°C.

Array	Dimensions (W x D x H) mm	Colour	PK	Cat. No.
15	153 x 102 x 21	natural	1	**6.254 573**
40	298 x 105 x 24	natural	1	**6.254 574**
78	299 x 178 x 21	natural	1	**6.254 575**

1 Square cover slips

Made of D263 M borosilicate glass. Accurate cutting free of flaws and blisters. Further thicknesses are available on request. *Menzel*

Width mm	Length mm	Thickness mm	PK	Cat. No.
15	15	0,13-0,16	200	**9.161 015**
18	18	0,13-0,16	200	**9.161 018**
20	20	0,13-0,16	200	**9.161 020**
22	22	0,13-0,16	200	**9.161 022**
24	24	0,13-0,16	200	**9.161 024**
26	21	0,13-0,16	100	**9.161 021**
32	24	0,13-0,16	100	**9.161 032**
40	24	0,13-0,16	100	**9.161 040**
50	24	0,13-0,16	100	**9.161 050**
60	24	0,13-0,16	100	**9.161 060**

2 Circular cover slips

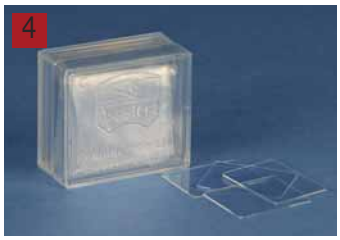
Made of D263 M borosilicate glass. Accurate cutting free of flaws and blisters. Diameters as indicated. Further sizes and thicknesses are available on request. *Menzel*

Diam. mm	Thickness mm	PK	Cat. No.
10	0,13-0,16	100	**9.161 063**
12	0,13-0,16	100	**9.161 064**
13	0,13-0,16	100	**9.161 065**
14	0,13-0,16	100	**9.161 066**
15	0,13-0,16	100	**9.161 061**
18	0,13-0,16	100	**9.161 062**

3 Haemacytometer cover glasses

Quality A, ground edges. *Menzel*

Width mm	Length mm	Thickness mm	PK	Cat. No.
22	22	0,4	10	**6.073 041**
24	24	0,4	10	**6.313 619**
26	20	0,4	10	**6.314 328**



4 Haemacytometer Cover Glasses

Packing: boxes of 10 pieces. *Hecht*

Length mm	Width mm	Thickness mm	PK	Cat. No.
30	30	0.4	10	**7.632 190**
20	26	0.4	10	**6.053 291**
22	22	0.4	10	**6.234 347**
24	24	0.4	10	**7.630 066**

5 LLG-Cover glass forceps, self-locking, stainless steel

Stainless steel 4301

Form	Length mm	PK	Cat. No.
Straight	105	1	**9.160 380**
Curved	105	1	**9.160 381**

6 LLG-Cover glass forceps, acc. to Kühne, stainless steel

Stainless steel 4301

Form	Length mm	PK	Cat. No.
curved	115	1	**9.160 386**
curved	130	1	**9.160 387**
curved	145	1	**9.160 388**
straight	115	1	**9.160 391**
straight	130	1	**9.160 392**
straight	145	1	**9.160 393**

1 Prepared Slides

Prepared microscope slides for education and studies.
Sets of 10 slides.

Type	PK	Cat. No.
Fishes, frogs and other ambhibians	1	**9.151 850**
Lizard snakes and birds	1	**9.151 851**
Animal reproduction	1	**9.151 852**
Bacteria simple organisms	1	**9.151 854**
Plant reproduction and propagation	1	**9.151 856**
Structure of vegetable plants	1	**9.151 857**
Cell development and reproduction	1	**9.151 858**
Nanoplankton	1	**9.151 859**
Human body, normal tissues Part 1	1	**9.151 860**
Human body, normal tissues Part 2	1	**9.151 861**
The human body pathological tissues part 1	1	**9.151 862**
The human body pathological tissues Part 2	1	**9.151 863**
Animal and human parasites	1	**9.151 864**
Life in the ground	1	**9.151 866**
Animals and plants damaged by the environment	1	**9.151 868**
Set for teaching science	1	**9.151 869**
Set for teaching biology part 1	1	**9.151 870**
Set for teaching biology part 2	1	**9.151 871**

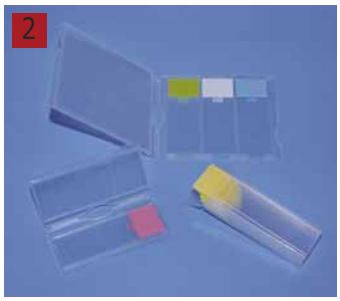
1

2 LLG-Slide mailers

Manufactured from high density polypropylene, for shipping, storing or staining slides.
Flat mailers can hold 1, 2, 3 or 5 standard (up to 76 mm x 26 mm) slides securely.
- Light weight and flat
- With marking area and "Top" printed on top surface
- With large, easy-to secure snaps.
- Slotted channels inside mailer keep slides safely separated

To hold microscope slides	PK	Cat. No.
1	10	**9.161 291**
2	10	**9.161 292**
3	10	**9.161 293**
5	10	**9.161 294**

2



3 Slide mailers

For transporting 76 x 26 mm specimen slides, as outlined below.

To hold microscope slides	Cover type	PK	Cat. No.
2	Without	1	**9.161 270**
4	Without	1	**9.161 274**
6	Without	1	**9.161 272**
10	Without	1	**6.225 466**

3

4 Slide Mailers

Ideal for shipping, storing, or staining slides. These polypropylene containers hold five standard slides (75 mm x 25 mm and 3 x 1"). Inside wall features slotted channels to keep slides separated and to make removal easier. Close securely to keep slides safe. Dimensions: 43 mm x 24 mm x 88 mm.

Heathrow Scientific

Colour	PK	Cat. No.
natural	25	**6.242 062**
red, yellow, blue, purple, orange	25	**9.409 662**

4

5 Slide Mailer, PP

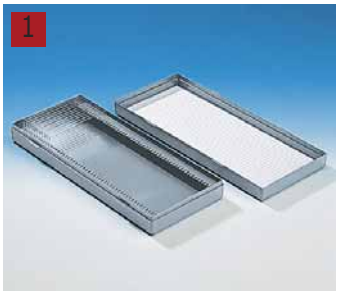
For storing or shipping 5 thick or 10 thin slides. Sturdy design. Screw cap with fitting for sealing wire tag. When cap is open the slides protrude approximately 10 mm so they can be removed easily. Unbreakable, chemically inert, leakproof.

Kartell

Int. diam. mm	Height mm	PK	Cat. No.
40	90	1	**9.161 395**

5

1



1 Microscope slide boxes, PS

High impact. For 76 mm x 26 mm slides. Numbered slots in base. Index card in lid. *Kartell*

To hold microscope slides	Width mm	Length mm	Height mm	PK	Cat. No.
25	83	98	38	1	**9.161 380**
50	97	230	35	1	**9.161 381**
100	180	230	35	1	**9.161 382**

2

2 Microscope slide folders

Cardbord. Available with, or without, gatefold cover. For 76 mm x 26 mm slides as outlined below.

To hold microscope slides	Cover type	PK	Cat. No.
20	without	1	**9.161 230**
20	with	1	**9.161 235**

3

3 20- and 30-place Cardboard Slide Trays

Features thumb cut for easy slide removal. *Heathrow Scientific*

Cardboard slide trays hold standard slides (76 mm x 26 mm and 3 x 1").
The horizontal compartments are recessed to protect the specimens when the cover is closed.
Features thumb cut for easy slide removal.

To hold microscope slides	Colour	Size	PK	Cat. No.
20	black	208 x 341 x 9 mm	1	**9.161 295**
30	black	281 x 328 x 10 mm	1	**9.161 296**
20	blue	208 x 341 x 9 mm	1	**9.161 297**
20	green	208 x 341 x 9 mm	1	**9.161 298**
20	red	208 x 341 x 9 mm	1	**9.161 302**

4

4 Microscope slide folder, Munich type

Cardboard. For 76 mm x 26 mm slides.

To hold microscope slides	PK	Cat. No.
24	1	**9.161 250**

5

9.161 211

Slide storage box

To hold microscope slides	Dimensions (D x W) mm	Cover type	Material	PK	Cat. No.
100	76 x 26	+	plastic	1	**9.161 211** 5
100	40 x 76	+	Cardboard, leather paper, wooden frame	1	**6.314 963**
100	48 x 28	-	Cardboard, leather paper, wooden frame	1	**9.161 224**

6

6 Microscope slide tray without lid

Cardboard. For 76 mm x 26 mm slides.

To hold microscope slides	PK	Cat. No.
20	1	**9.161 260**

Trays for other sizes of slide are available on request.

7

7 Slide storage box

Cardboard covered with imitation leather. Hinged lid with locking clips.
Holds slides 76 mm x 26 mm slides as outlined below.

To hold microscope slides	Cover type	PK	Cat. No.
25	+	1	**6.206 674**
50	+	1	**9.161 215**
100	+	1	**9.161 210**

1 Microscope slide boxes

Colour-coded for easy identification. Slide boxes are perfect for storage or transportation of standard size slides (76 mm x 26 mm). With cork lining. Stackable. Each 100 place box is secured with a rust-resistant nickel-plated clasp and hinge pin. The 50 place box is secured by a thumb-latch lock mechanism. Each slot is numbered to correspond to the slide inventory sheet on the inside cover of the box. *Heathrow Scientific*

To hold microscope slides	Colour	Dimensions (W x D x H) mm	PK	Cat. No.
25	Red	141 x 88 x 35	1	**6.240 818**
25	Green	141 x 88 x 35	1	**6.240 819**
25	Blue	141 x 88 x 35	1	**6.241 030**
50	Red	209 x 86 x 35	1	**9.161 289**
50	Blue	209 x 86 x 35	1	**9.161 300**
50	White	209 x 86 x 35	1	**6.268 500**
100	Red	208 x 175 x 34	1	**9.161 286**
100	Green	208 x 175 x 34	1	**9.161 285**
100	Blue	208 x 175 x 34	1	**9.161 284**
100	White	208 x 175 x 34	1	**7.079 563**
100	Yellow	208 x 175 x 34	1	**9.161 288**
100	Black	208 x 175 x 34	1	**9.161 287**

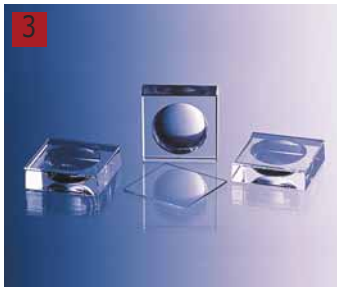
2 Microscope Slide Boxes Premium Plus

Made from ABS and Polypropylene. The stackable slide boxes are perfect for storage or transportation of 100 standard size slides (76 x 26 mm). Unique side storage can accommodate e.g. a pen or desiccant. *Heathrow Scientific*
Dimensions (W x D x H): 195 x 207 x 32 mm.

- With EVA foam lining
- Removable Inventory card
- Sliding lock
- Centrally positioned numbering
- Labelling area on the lid of the box with "project" and "date" molded in and the back of the index card can be used as the lid is transparent

Colour	PK	Cat. No.
Blue	1	**4.666 453**
Orange	1	**4.666 454**
Green	1	**4.666 455**
Red	1	**4.666 456**
Purple	1	**4.666 457**
Purple, Blue, Green, Red, Orange	5	**4.666 458**

3 Staining blocks, moulded glass



With hemispherical cavity, 32 mm diameter and 40 mm x 40 mm glass cover plate.

Colour	Int. bore diam. mm	Number of cavities	PK	Cat. No.
Clear	32	10	1	**9.163 285**
Black	32	10	1	**9.163 286**

4 LLG-Staining plates, porcelain

Rectangular, white, glazed. With cavities as outlined below.

Int. bore diam. mm	Width mm	Length mm	Cavity depth mm	Height mm	Number of cavities	PK	Cat. No.
25	81	112	4	25	6	1	**6.232 575**
17	91	115	2	17	12	1	**6.265 001**

5 Cavity tiles, porcelain

Rectangular, white, glazed, with cavities as outlined below. *Haldenwanger*

Int. bore diam. mm	Width mm	Length mm	Cavity depth mm	Height mm	Number of cavities	PK	Cat. No.
36	80	115	11	12	6	1	**9.253 406**
20	85	119	3	6	12	1	**9.253 412**
25	97	127	6	12	12	1	**6.901 028**

1

1 LLG-Staining jars, soda-lime-glass

The Schiefferdecker Staining Jar is suitable for holding 76 mm x 26 mm slides horizontally.
This staining jar has 10 grooves which can accommodate 20 slides back-to-back.
The Hellendahl Staining Jar is suitable for holding 76 mm x 26 mm slides vertically.
This staining jar has 8 grooves which can accommodate 16 slides back-to-back.
The "Macro" Staining Jar is suitable for holding 20 slides with 76 mm x 26 mm (please order rack separately).
This Stainless Steel rack for "Macro" has 20 grooves which can accommodate 20 single slides.
Each staining jar is supplied with a glass lid.

Type	Width mm	Length mm	Height with cap mm	PK	Cat. No.
Schiefferdecker Staining Jar	68	88	50,15	1	**9.163 250**
Hellendahl Staining Jar	61	63	102	1	**9.163 251**
"Macro" Staining Jar	88	105	78	1	**9.163 252**
Rack, Stainless Steel, for "Macro" jar				1	**9.163 253**

2

2 Staining rack, Glass

Glass. Holds microscope slides 76 mm x 26 mm to 50 mm. (Fits trough 9.163 281 not supplied).
An accessory wire lifting handle is available.

Type	Width mm	Length mm	Height mm	PK	Cat. No.
Staining rack	30	85	45	1	**9.163 280**
Wire handle				1	**9.163 284**

3

3 Trough

Glass. Accepts one staining rack 9.163 280 (not supplied).

Type	Width mm	Depth mm	Height mm	PK	Cat. No.
Trough	105	85	70	1	**9.163 281**
Insert for 10 slides	91	70	48	1	**7.020 105**
Wire handle for insert				1	**7.020 111**

4

4 Preparation box DURAN®, with ground glass plate

The precise grinding of the glass plate and the lower part of the vessel enables a tight closure.

DWK Life Sciences

Width mm	Depth mm	Height mm	PK	Cat. No.
50	60	100	1	**7.021 162**
50	100	120	1	**7.021 164**
50	130	130	1	**7.021 165**
50	150	150	1	**9.172 319**
60	120	180	1	**9.020 440**
100	210	210	1	**7.021 170**
140	250	250	1	**7.021 172**

5

5 Aquaria, clear glass

With fine ground rim.

Hecht

Width mm	Depth mm	Height mm	PK	Cat. No.
100	150	150	1	**6.306 510**
130	180	180	1	**6.270 192**
150	200	200	1	**6.270 193**
180	220	250	1	**6.270 194**
220	300	240	1	**6.079 530**
230	360	260	1	**7.601 329**
220	300	150	1	**7.601 348**

E & OE.

1 Disposable Staining Slide Tray

Heathrow Scientific

Stain, rinse, and dry your slides on a single working tray. Made of a polypropylene and polyethylene blend, this rugged staining tray is an economical alternative to metal versions offering a clean and fresh working surface area every time.
Up to eight slides fit comfortably onto the base and the deep well holds liquid waste up to 38 ml.
Two convenient pour spouts make it easy to dispose of unwanted liquid waste.
Unique dark lid protects slides when used with light sensitive applications.
Supplied with 4 Base Trays and 1 Lid.

To hold microscope slides	Length mm	Width mm	Height mm	PK	Cat. No.
8	305	127	29.5	1	**9.161 400**

2 Staining jar, PMP (TPX®)

Kartell

Supplied with 2 lids, one complete lid for use providing evaporation-free storage of staining liquids, the other lid with an opening to allow the handle of accessory staining rack 9.161 341 to be inserted.
Note: Xylene can cause etching after 2 days at room temperature.

Width mm	Length mm	Height mm	PK	Cat. No.
74	95	63	1	**9.161 340**

3 Staining rack, PP

Kartell

For use with staining jar 9.161 340. PP, with horizontal tray, holds 20 slides.

Width mm	Length mm	Height mm	PK	Cat. No.
21.5	86	72	1	**9.161 341**

4 Staining jar, PMP (TPX®), Schiefferdecker pattern

Kartell

Accepts 20 slides 76 mm x 26 mm (10 pairs back to back).
Transparent. Complete with lid.
Note: Xylene can cause etching after 2 days at room temperature.

Width mm	Length mm	Height mm	PK	Cat. No.
65	76	45	1	**9.161 352**

5 Staining jar, PMP (TPX®), Hellendahl pattern

Kartell

Accepts 16 slides 76 mm x 26 mm (8 pairs back to back).
Transparent, with grooves. Complete with lid.

Width mm	Length mm	Height mm	PK	Cat. No.
58	53.5	86	1	**9.161 350**

1 Staining troughs

Hellendahl pattern. Glass with lid.
Hold 16 slides, 76 x 26 mm.

Width mm	Length mm	Height mm	PK	Cat. No.
35	85	95	1	**9.163 277**
55	60	105	1	**9.163 278**

9.163 278 with flared top

2 Staining jar, glass, Coplin

Coplin pattern. Glass.

Diam. mm	Height mm	PK	Cat. No.
45	105	1	**9.163 283**

3 Staining troughs, Hellendahl extended, Soda-lime glass

- With lid
- For 16 slides à 76 x 26 mm

BRAND

Dimensions (W x D x H) mm	PK	Cat. No.
60 x 55 x 105	1	**6.020 109**

4 Staining cylinders

Soda lime glass. With drop-on cover.

Type	Diam. mm	Width mm	Length mm	Height mm	PK	Cat. No.
Round	40			85	1	**9.163 273**
Oval		25	40	85	1	**9.163 274**
Rectangular		20	40	85	1	**9.163 275**

E & OE.

1 Precision refractometers, basic model

Simple and precise optical instruments to analyse liquids and their solid contents. Models are equipped with an automatic temperature compensation device (ATC). Supplied with a plastic box and comfortable leather-type case.

Type	For	Measuring range	Accuracy	PK	Cat. No.
RSM/ATC	Salinity	0 - 100 ‰	1 ‰	1	**9.801 249**
RMA/ATC	Wine	0 - 25 % Vol 0 - 40 % Brix	0,2 % Vol 0,2 % Brix	1	**9.801 252**
RGA/ATC	Alcohol	0 - 80 % Vol	1 % Vol	1	**9.801 256**
RCS/ATC	Salinity	0 - 28 %	0,2 %	1	**9.801 250**
RPC/ATC	Freezing point batteries	-50 - 0 °C 1,10 - 1,40	5 °C 0,1	1	**9.801 251**
RBO/ATC	Wine	0 - 140° Oe 0 - 25° Babo 0 - 32 % Brix	1° Oe 0,2° Babo 0,2 % Brix	1	**9.801 254**
RBB/ATC	Wine	0 - 25 % Vol 0 - 22° Be' 0 - 40 % Brix	0,2 % Vol 0,2° Be' 0,2 % Brix	1	**9.801 255**
RCZ/ATC		0 - 32 % Brix	0,2 %	1	**9.801 200**
RBC/ATC		0 - 10 % Brix	0,1 %	1	**9.801 241**
RLC/ATC		0 - 18 % Brix	0,1 %	1	**9.801 242**
RFC/ATC		28 - 62 % Brix	0,2 %	1	**9.801 244**
RPU		0 - 80 % Brix	1 %	1	**9.801 246**
RMM/ATC	Honey and jam	58 - 90 % Brix 38 - 43° Be' 17 - 27 water	0,5 % Brix 0,5° Be' 1 % water	1	**9.801 247**

1

Manual hand-held refractometers

Precision instruments for quick daily use. Various scales and functions ensure there is a suitable refractometer for every application area.

A.KRÜSS Optronic

Type	Measuring range	Accuracy	PK	Cat. No.
HRB32-T*	0 … 32 % Brix	±0.2 % Brix	1	**9.801 142** 2
HRB90	0 … 90 % Brix	±0.2 % Brix	1	**9.801 150**
HRND	nD 1.3330 … 1.5170	nD ±0.0005	1	**9.801 151** 3
HRB92-T	58 … 92 % Brix, 38 ... 43 °Baume, 12 ... 27 % water in honey	±1 % Brix, ±0.5 °Baume, ±1 % water in honey	1	**6.290 771**
HRB18-T	0 … 18 % Brix	±0.1 % Brix	1	**4.662 296**
HRB82-T	45 … 82 % Brix	±0.2 % Brix	1	**4.662 319**
HRKFZ-T	50 … 0 °C, 1.10 … 1.30 g/cm³	±5 °C, 0.01 g/cm³	1	**4.662 320**
HRS10-T	0 … 10 ‰	±1 ‰	1	**4.662 321**
HRH30-T	12 ... 30 % water in honey	±0.1 % water in honey	1	**6.311 908**

*with automatic temperature compensation

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9.801 142

3

9.801 151

Refractometers, hand-held, precision

ATAGO

For simple, manual measurement of concentrations and refractive indices of liquids. Hand-held, precision refractometers with focussing eyepiece, soft rubber eyecups (to reduce straylight ingress, also spectacle lenses do not slip off and are not scratched), case and conversion tables. Hand-held refractometers cannot be fitted with a thermostatic controller and so measurements have to be temperature compensated.

Models with extra code M: Basic model
Models with extra code T: with automatic temperature compensation (ATC)
Models with extra code α: with automatic temperature compensation (ATC) and protection class IP65
Models with extra code H: for hot samples, with prism made of tempered glass

Type	For	Measuring range	Accuracy	Minimum scale value	PK	Cat. No.
MASTER 53α	Brix	0,0 - 53,0 % Brix	±0.5 % Brix	0.5 % Brix	1	**7.619 590** 1
MASTER-S10α	Sodium chloride	0,0 - 10,0 g/100 g	± 0.2 g/100 g	0.1 g/100 g	1	**9.801 372**
MASTER-S28α	Sodium chloride	0,0 - 28,0 g/100 g	±0.2 g/100 g	0.2 g/100 g	1	**7.653 540**
MASTER-20T	Brix	0,0 - 20,0% Brix	±0.2 % Brix	0.1 % Brix	1	**9.801 301**
MASTER-53T	Brix	0,0 - 53,0 % Brix	±0.5 % Brix	0.5 % Brix	1	**9.801 472**
MASTER-20M	Brix	0,0 - 20,0 % Brix	-	0.1 % Brix	1	**6.235 710**
MASTER-53M	Brix	0,0 - 53,0% Brix	-	0.5 % Brix	1	**9.801 302**
MASTER-S10M	Sodium chloride	0,0 - 10,0 g/100 g	-	0.1 g/100 g	1	**9.801 370**
MASTER-S28M	Sodium chloride	0,0 - 28,0 g/100 g	-	0.2 g/100 g	1	**9.801 335**
MASTER-S/Mill-α	Salinity, Sea water Spec. density	0,0 - 100,0 ‰ 1,000 - 1,070	±2 ‰ ± 0,001	1 ‰ 0.001	1	**9.801 359**
MASTER 500	Universal application	0,0 - 90,0 % Brix	-	1.0 % Brix	1	**6.261 851**
MASTER-BR	Freezing point coolant*	0 - 70%, 0 ... -50 °C	-	5 °C	1	**9.801 348**
MASTER-RI	Refractive index	1,435 - 1,520 nD	-	0.001 nD	1	**9.801 360**
HSR-500	Brix	0,0 - 90,0% Brix	-	0.2 % Brix	1	**9.801 312** 2
R-5000	Refractive index	1,333 - 1,520 nD	-	0.001 nD	1	**9.801 313**
HHR-2N	Honey	12,0 - 30,0% humidity	-	0.1 %	1	**9.801 333** 3
MASTER-20α	Fruit juice, cutting oil	0,0 - 20,0 % Brix	±0.2 % Brix	0.1 % Brix	1	**6.230 298**
MASTER-TA	Wine	0,0 - 25,0 % T.A., 0,0 - 40,0 % Brix	±0.3 % T.A. ± 0.2 % Brix	0.2 % T.A. 0.5 % Brix	1	**6.231 790**
MASTER-OE	Wine	0 - 130 Oe 0,0 - 33,0 % Brix	±2 Oe ± 0.2 % Brix	2 Oe 0.5 % Brix	1	**7.970 129**
MASTER-GOE	Wine	30 - 170° 0,0 - 40,0 % Brix	±2° ± 0.5 % Brix	1° 0.5 % Brix	1	**6.286 459**
MASTER-KMW	Wine	0,0° - 27,0° 0,0 - 33,0 % Brix	±0.5° ± 0.5 % Brix	0.5° 0.5 % Brix	1	**6.286 460**
MASTER-BAUME	Wine	0,0 - 21,0 Baume 0,0 - 40,0 % Brix	±0.3 Baume ± 0.5 % Brix	0.2 Baume 0.5 % Brix	1	**6.229 977**
MASTER-80H	Brix	30,0 - 80,0 % Brix	±0.5 % Brix	0.5 % Brix	1	**6.230 295**
MASTER-93H	Brix	45,0 - 93,0 % Brix	±0.5 % Brix	0.5 % Brix	1	**6.238 823**
MASTER-100H	Brix	60,0 - 100,0 % Brix	±0.5 % Brix	0.5 % Brix	1	**7.652 042**
MASTER-Honey/BX	Honey	12,0 - 30,0% humidity 58,0 - 90,0 %	±0.2 % Brix	0.2 % Brix	1	**6.286 461**
MASTER-50H	Brix	0.0 - 50.0 Brix	±0.5 % Brix	0.5 % Brix	1	**6.234 218**
MASTER-S/MillM	Sodium chloride	0 - 100‰	-	1 ‰	1	**6.242 307**

*for Ethylene glycol and Propylene glycol

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7.619 590

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9.801 312

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9.801 333

E & OE.

1 LLG-uni*REFRACTO* 5 pro

NEW

1

LLG-uni*REFRACTO* 5 pro is a compact digital 3-scale handheld refractometer for measuring, e.g. Brix and refractive index of liquids. Two scales are pre-set to 0 - 95 % Brix and 1.33 - 1.54 RI, the third scale can be freely selected from more than 45 different scales, including Brix, refractive index, AdBlue®, °Baume, °Butyro, Ethylene Glycol %, Calcium Chloride % and specific gravity. All three scales can be freely selected and changed. The operation is quick and easy, calibration can simply be done with distilled water. The waterproof housing (IP 65) allows cleaning under running water.

- Easy switching between the three scales
- 4-digit LCD display
- Automatic temperature correction
- Sample plate made of stainless steel

Scope of supply: refractometer, protective cover

Specifications

Resolution:	0.1 % Brix/0.0001 RI
Accuracy:	±0.2 % Brix/±0.0003 RI
Operating temperature:	5 ... 40 °C
Measuring temperature sample:	5 ... 80 °C
Rel. Humidity:	< 95 %
Dimensions (W x D x H):	120 x 55 x 35 mm
Weight:	180 g
Power supply:	2 x AAA/LR03
IP code:	IP65
Warranty:	3 years

Type	PK	Cat. No.
LLG-uni*REFRACTO* 5 pro	1	**6.263 632**

Digital Hand-held Pocket Refractometer PAL series

2

ATAGO

9.801 375

For measurement of various high concentration samples such as jam, marmalade, jelly, honey, concentrated juice or acidity and salinity. Ingress Protection class IP 65 means that they can be cleaned under running water. Easily calibrated since "zero-setting" (calibration) is achieved using water. Temperature measurement with Automatic Temperature Compensation. Various models for a variety of applications, e.g. measurement of urine, salt, sugar. With data transmission via near field communication (NFC).

Specifications

Resolution:	Brix 0.1 %
Measurement accuracy:	Brix ±0.2 %
Ambient operating temperature:	10 to 40 °C
IP code:	IP 65 dust- and waterproof
Power supply:	2 x AAA Batteries (incl.)
Dimensions:	55 x 31 x 109 mm
Weight:	100 g

Type	For	Measuring range	Temp. range °C	PK	Cat. No.
PAL-1	Brix	0.0 - 53.0 Brix	10 - 100	1	**9.801 375** 2
PAL-3	Brix	0.0 - 93.0 Brix	10 - 100	1	**9.801 382**
PAL-Alpha	Brix	0.0 - 85.0 Brix	10 - 100	1	**9.801 362**
PAL-RI	Refractive index	1.3306 - 1.5284nD	5 - 45	1	**9.801 383**
PAL-BX/RI	Brix + refractive index	0.0 - 93.0 Brix, 1.3306 - 1.5284nD	Brix: 10 - 100, nD: 5 - 45	1	**6.231 591**
PAL-22S	Honey, moisture	12.0 - 30 %	10 - 40	1	**6.232 434**
PAL-10S	Urine, spec. gravity (USG)	1000 - 1060 S.G.	10 - 35	1	**6.236 094**
PAL-UREA	Urine, concentration in water	0.0 - 55.0 %	10 - 40	1	**6.258 218**
PAL-DOG/CAT	Urine of animals, spec. gravity	DOG: 1000 - 1060 S.G. CAT: 1000 - 1080 S.G.	10 - 35	1	**6.286 468**
PAL-SALT	Salt	0.00 - 10.0 % g/100 g	5 - 100	1	**6.283 064**
PAL-03CS	Salt	0,00 - 28.0 % g/100 g	10 - 40	1	**4.672 019**
PAL-06S	Salinity, Sea water	0 - 100 ‰	10 - 40	1	**6.272 489**
PAL-34S	Ethyl alcohol (g/100 g)	0,0 - 45 %	10 - 35	1	**6.251 197**
PAL-91S	Ethylene glycol (V/V)	0,0 - 90.0 %	10 - 40	1	**7.920 049**
PAL-88S	Polypropylene, concentration (V/V)	0,0 - 90.0 %	10 - 40	1	**7.910 093**
PAL-PLATO	Beer	0,0 - 30.0 P	10 - 75	1	**6.258 663**
PAL-COFFEE (BX/TDS)	Coffee	0,00 - 25.00 % Brix 0,00 - 22.00 % TDS	10 - 100	1	**6.270 239**
PAL-39S	Hydrogen peroxid (g/100 g)	0,0 - 50.0 %	10 - 35	1	**6.230 985**
PAL-102S	Cutting oil + coolant	0.0 - 70.0	10 - 100	1	**6.242 530**

1

6.291 100

Digital Hand-held Pocket Refractometer PAL-BX/ACID series

NEW

ATAGO

For measuring Brix and Acidity of fruit.
The combination of Brix and Acidity determines fruit maturity and Brix to Acid ratio.
Easy and precise measurement without titration and chemicals.

Scope of supply: Refractometer, balance, 1 x beaker, 1 x measuring spoon

Specifications

Measuring range Brix:	0.0 ... 60.0 %
Accuracy Brix:	±0.2 %
Accuracy Acidity:	±0.10 % (0.10 .. 1 %) relative accuracy ±10 % (1.01 ... 8.80 %)
Temperature range:	10.0 ... 40.0 °C
Accuracy Temperature:	±0.1 °C
Dimensions (W x D x H):	55 x 31 x 109 mm
Weight:	100 g
Power supply:	2 x AAA batteries
IP code:	IP65

Type	For	Measuring range	PK	Cat. No.
PAL-BX/ACID F5 Master Kit	Multi Fruit	Multiple	1	**6.291 099**
PAL-BX/ACID1 Master Kit	Citrus	0.10 ... 8.80 %	1	**6.291 100** 1
PAL-BX/ACID2 Master Kit	Grape & Wine	0.10 ... 4.00 %	1	**6.287 939**
PAL-BX/ACID3 Master Kit	Tomato	0.10 ... 4.00 %	1	**6.286 007**
PAL-BX/ACID4 Master Kit	Strawberry	0.10 ... 3.50 %	1	**6.291 101**
PAL-BX/ACID5 Master Kit	Apple	0.10 ... 4.00 %	1	**6.291 102**
PAL-BX/ACID6 Master Kit	Banana	0.10 ... 0.60 %	1	**6.291 103**
PAL-BX/ACID7 Master Kit	Blueberry	0.10 ... 4.00 %	1	**6.291 104**
PAL-BX/ACID8 Master Kit	Kiwi	0.10 ... 3.00 %	1	**6.291 105**
PAL-BX/ACID9 Master Kit	Pineapple	0.10 ... 3.50 %	1	**6.291 106**
PAL-BX/ACID11 Master Kit	Plum	0.10 ... 4.00 %	1	**6.291 107**
PAL-BX/ACID14 Master Kit	Pear	0.10 ... 4.00 %	1	**6.291 109**
PAL-BX/ACID40 Master Kit	Coffee cherry	0.10 ... 1.90 %	1	**6.291 110**
PAL-BX/ACID91 Master Kit	Milk	0.10 ... 0.30 %	1	**6.291 111**
PAL-BX/ACID96 Master Kit	Yogurt	0.10 ... 3.00 %	1	**6.291 112**
PAL-BX/ACID101 Master Kit	Beer	0.10 ... 20.00 %	1	**6.291 113**
PAL-BX/ACID121 Master Kit	Sake	0.5 ... 25.00 %	1	**6.291 114**
PAL-BX/ACID181 Master Kit	Vinegar	0.5 ... 12.00 %	1	**6.291 115**

2

9.80 1376

3

9.801 369

Digital refractometers

ATAGO

Type PR-32α
Can be used to measure fruit juices, soft drinks, diluted soluble oils,
aqueous cleaning solutions, etc.

Type PR-101α
Applications include measuring fruit juices, lemonade, coffee, diluted soluble oils and anti-freeze solutions.

Type PR-201α
It can be used for accurately measuring jams, concetrated fruit juices, coolants and similar products.

Type PR-301α
Especially suited to measuring jellies, liquid cane sugar,etc.

Type PET-109
This model is used for simply determining the concentration of ethyl alcohol,
which is used in foods and for cleaning, cooling and other purposes.

Type PR-RI
A new Refractive Index model has been added to the popular long-selling "Palette Series".
It is suitable for measuring the refractive indices of liquid samples in pharmaceutical and chemical products.
Ambient temperature: 10 to 40 °C.

All models are with data transmission via near field communication (NFC).

Specifications (all types):

Measurement time:	3 seconds (Type PET-109, Measurement time: 2 seconds)
Sample volume:	0.1 ml
Power supply:	9V battery
Dimensions:	170 x 90 x 40 mm
Weight:	300g

Type	Measuring range	Graduations	Accuracy	Working Temp. range °C	PK	Cat. No.
PR-32α	0,0 - 32,0 % Brix	0,1 % Brix	± 0,1 % Brix	5,0 - 40,0	1	**9.801 376** 2
PR 101α	0,0 - 45,0 % Brix	0,1 % Brix	± 0,1 % Brix	5,0 - 40,0	1	**9.801 377**
PR-201α	0,0 - 60,0 % Brix	0,1 % Brix	± 0,1 % Brix	10,0 - 40,0	1	**9.801 378**
PR-301α	45,0 - 90,0 % Brix	0,1 % Brix	0,1 % Brix*	10,0 - 40,0	1	**9.801 379**
PET-109	0,0 - 45,0 % (w / w)	0,1 % (w / w)	± 0,5 % (w / w)	10,0 - 35,0	1	**9.801 344**
PR-RI	1,3306 - 1,4436 nD	-	± 0,0002 nD / 20 °C	5,0 - 45,0	1	**9.801 369** 3

*from 10 to 30 °C

E & OE.

Digital hand-held refractometers DR101-60/DR201-95/DR-301-95

Digital hand-held refractometer with two different scales, Brix and RI. *A.KRÜSS Optronic*
Handling is fast and very easy, distilled water is used for calibration. With automatic temperature compensation.

DR301-95 offers 2 additional user-defined scales and can be connected to a computer.
Specialities: optional temperature compensation feature and upper and lower tolerance alarm.

Specifications	**DR101-60 | DR201-95 | DR301-95**
Temperature range:	10 ... 40 °C
Accuracy:	±0.5 °C
Temperature compensation:	10 ... 40 °C
Dimensions:	110 x 62 x 32 mm | 130 x 80 x 40 mm | 180 x 100 x 60 mm
Weight:	160 g | 200 g | 500 g
Power supply:	1.5 V battery | 1.5 V battery | 9 V battery, incl. AC adapter
IP code:	IP65 | IP64 | IP50

Type	Measuring range	Accuracy	Resolution	PK	Cat. No.
DR101-60	nD 1.330 ... 1.4419 0 ... 60.0 %Brix	nD ±0.0005 ±0.35 %Brix	nD 0.0001 0.1 %Brix	1	**9.801 117**
DR201-95	nD 1.3330 ... 1.5318 0 ... 95 %Brix	nD ±0.0003 ±0.2 %Brix	nD 0.0001 0.1 %Brix	1	**6.230 350** 1
DR301-95	nD 1.3330 ... 1.5318 0 ... 95 %Brix	nD ±0.00015 ±0.1 %Brix	nD 0.0001 0.1 %Brix	1	**6.236 921** 2

1

6.230 350

2

6.236 921

Digital portable refractometers Refracto 30PX/30GS

Portable device for determining refractive index and derived concentration values. *Mettler-Toledo Online*
Simple operation and fast results: the sample is either dripped onto the measuring cell or the instrument is immersed directly in the sample liquid. Suitable for laboratory and field measurements, e.g. in food processing or industry.

- Automatic temperature compensation
- Suitable for measurement of dark samples
- Backlit LCD display shows values and menu functions
- Calibration with water
- Memory for up to 1100 measured values, together with sample ID, unit, temperature compensation coefficient, time and date
- Individual formulas for calculation of user-defined concentration data can be defined in the device
- Measuring units: nD, nD temperature compensated, Brix% temperature compensated, HFCS42, HFCS55, °Baumé, °Oechsle (D, CH), °KMW (Babo), T.A. 1990, weight %, vol.-%, specific weight and freezing point (in °C or °F) for ethanol and NaCl, weight %, volume % and freezing point (in °C or °F) for ethylene glycol and propylene glycol, weight % and volume % for isopropyl alcohol, user-defined unit
- Values can be transferred to the PC via IR interface

Refracto 30PX: Optical glass measurement cell
Refracto 30GS: Sapphire measurement cell for larger measuring range and faster temperature compensation

Scope of delivery: Refracto 30PX/GS, pipette for sample handling, cleaning towels, operating instructions, flasks for sample and cleaning solutions, CD-ROM with software for data transmission, transport case

3

9.947 555

Specifications	Refracto 30 PX // Refracto 30 GS
Refraction range:	1.32 ... 1.50 // 1.32 ... 1.65
Refraction accuracy:	±0.0005
Refraction resolution:	0.0001
Brix range:	0 ... 85 %
Brix accuracy:	±0.2 %
Brix resolution:	0.1 %
Temperature range:	0 ... 40 °C
Temperature resolution:	0.1 °C
Dimensions (W x D x H):	62 x 187 x 63 mm
Weight:	250 g
Power supply:	2 x AAA 1.5 V (please order separately)

Type	PK	Cat. No.
Refracto 30PX	1	**9.947 555** 3
Refracto 30GS	1	**9.947 556**

1

6.266 906

Digital Refractometer RX-5000i/RX-5000i-Plus

ATAGO

The most accurate refractometer in the world is now even more stylish, smart, and functional. Featuring intuitive touch screen technology, the new RX-i series makes navigation and selection a breeze. The RX-5000i measures with the same accuracy level as the RX-5000alpha (±0.03 % Brix and ±0.00004 nD). The RX-5000i-Plus measures with the same accuracy level as the RX-5000alpha-Plus (±0.010 % Brix and ±0.00002 nD). The RX-i series come with newly added functions, such as USB flash drive and self-diagnosis capability. These products come standard with a 2 year warranty. The warranty period can be extended to 3 years if the product is registered with ATAGO.
FDA 21 CFR Part 11 Software Included in Standard Delivery

Modes:
- Displays the measurement value once the sample reaches the target temperature
- Measures refractive index and temperature at fixed intervals and displays the estimated measurement value at the target temperature
- The thermo-module can be turned off. Without temperature control, the measurement value is displayed in 4 seconds after the START key is pressed
- Displays the measurement value once a certain level of sample stability is achieved.
- Only on the RX-5000i-Plus: Measuring of Low Brix Liquid Samples (such as teas), obtaining highly repeatable results (0.010 % Brix).

Specifications

Measurement range:	0.000 to 100.00 % Brix, 1.32420 to 1.58000 nD
Resolution	
RX-5000i:	0.01 % Brix, 0.00001 nD
RX-5000i-Plus:	0.005 % Brix, 0.00001 nD
Accuracy	
RX-5000i:	0.03 % Brix, 0.00004 nD
RX-5000i-Plus:	0.010 % Brix, 0.00002 nD
Working temperature:	5 to 75 °C
Output terminals:	USB, RS-232C
Power supply:	100 - 240 V, 50/60 Hz
Dimensions:	370 x 260 x 140 mm
Weight:	6.6 kg

Type	PK	Cat. No.
RX-5000i	1	**6.266 906** 1
RX-5000i-Plus	1	**6.245 034**

2

2 CO_2/Brix Monitor CooRe

NEW

ATAGO

Dissolved carbon dioxide monitor with three functions, piercing a hole in the container, measuring dissolved carbon dioxide and Brix.

- Easy operation with a press of button
- With auto measurement, results in 1.5 min
- Simultaneously measures CO_2 and Brix
- Requires only 100 ml of sample
- Can be operated by AC adapter or battery for mobile use
- USB port

Specifications

Measuring range Brix:	0.00 ... 20.00 %
Accuracy:	±0.05 %
Measuring range CO_2:	0.000 ... 24.000 g/l
Measuring range pressure:	0.00 ... 10.000 bar
Accuracy:	±1.0 %
Messbereich Temperatur:	0.0 ... 30.0 °C
Accuracy:	±1 °C
Working Temperaure	
Brix:	5.0 ... 30.0 °C
CO_2:	0 ... 25 °C
Dimensions (W x D x H):	405 x 210 x 450 mm
Weight:	13 kg
Power supply:	230 V, 50/60 Hz or 1 x Lithium battery
IP code:	IP 65

Type	PK	Cat. No.
CooRe	1	**6.273 964**

E & OE.

Digital Laboratory refractometers

1

A.KRÜSS Optronic

The DR6000 refractometers work with hardly any service and are very quiet, good for long-term work in the lab. Very easy to operate due to an intuitive touch screen.
Optional connections to printer, PC or network provide highest flexibility. High precision through integrated peltier thermostat (T-model). Flow measurement cells enable continuous measuring (TF-model).
The devices are used wherever a substance in watery solutions has to be measured.
Areas of usage: beverage, chemistry, pharma, food, paper, sewerage, textile, petrochemistry, cosmetics.

9.801 102

Specifications

Interface:	RS-232, USB, Ethernet
Temperature range:	10 ... 80 °C
Resolution:	0.1°C
Accuracy:	0.1 °C
Measurement modes:	Single, interval
Scales:	Refractive index (nD), concentration of sucrose, glucose, fructose and invert sugar (%Brix), user-defined
Power supply:	90 ... 240 V, 47/63 Hz

Type	Measuring range	Accuracy	Resolution	PK	Cat. No.
DR6000	nD 1.3200 ... 1.5800 0 ... 95 %Brix	nD ±0.0001 ±0.1 %Brix	nD 0.0001 0.1 %Brix	1	**6.239 384**
DR6000-T	nD 1.3200 ... 1.5800 0 ... 95 %Brix	nD ±0.0001 ±0.1 %Brix	nD 0.0001 0.1 %Brix	1	**6.237 965**
DR6000-TF	nD 1.3200 ... 1.5800 0 ... 95 %Brix	nD ±0.0001 ±0.1 %Brix	nD 0.0001 0.1 %Brix	1	**9.801 101**
DR6100-T	nD 1.3200 ... 1.7000 0 ... 95 %Brix	nD ±0.0001 ±0.1 %Brix	nD 0.0001 0.1 %Brix	1	**6.241 690**
DR6100-TF	nD 1.3200 ... 1.7000 0 ... 95 %Brix	nD ±0.0001 ±0.1 %Brix	nD 0.0001 0.1 %Brix	1	**6.235 892**
DR6200-T	nD 1.32000 ... 1.58000 0 ... 95 %Brix	nD ±0.00002 ±0.02 %Brix	nD 0.00001 0.01 %Brix	1	**9.801 102** 1
DR6200-TF	nD 1.32000 ... 1.58000 0 ... 95 %Brix	nD ±0.00002 ±0.02 %Brix	nD 0.00001 0.01 %Brix	1	**9.801 103**
DR6300-T	nD 1.32000 ... 1.70000 0 ... 95 %Brix	nD ±0.00002 ±0.02 %Brix	nD 0.00001 0.01 %Brix	1	**9.801 104**
DR6300-TF	nD 1.32000 ... 1.70000 0 ... 95 %Brix	nD ±0.00002 ±0.02 %Brix	nD 0.00001 0.01 %Brix	1	**9.801 105**

Digital Laboratory refractometers Abbemat 3000/3100/3200

NEW

2

Anton Paar

The laboratory refractometers Abbemat are equipped with the most important refractometric concentration beams, whereby further methods can be installed.
They are characterised by fast measurements with high accuracy and are maintenance-free.
For Abbemat 3200 and 3100 the built-in temperature control unit regulates the temperature, while the Abbemat 3000 provides automatic temperature correction.

- Compact device according to DIN A 4 size
- Sample trough with smooth, easy to clean surface and optimal shape of the measuring area
- 5.8" touchscreen for clear presentation of the measurement results
- More than 200 additional scales available on request
- 3 years warranty

6.313 802

Specifications

Temperature accurancy:	±0.05 °C
Light source:	LED
Wave length:	589 nm
Sample volume:	approx. 0.2 ml
Interfaces:	RS-232, 2 USB-interface, 1 serial USB-interface, ethernet printer, ethernet LIMS (Abbemat 3200)
Scales:	refractive index, brix, glucose, fructose, invert sugar, sucrose
Dimensions (W x D x H):	228 x 300 x 94 mm
Power supply:	100 ... 240 VDC, 50/60 Hz

Type	Measuring range	Accuracy	Resolution	Temp. range °C	PK	Cat. No.
Abbemat 3000	nD 1.30 ... 1.66 0 ... 100 %Brix	nD ±0.0001 ±0.05 %Brix	nD 0.0001 0.01 %Brix	Temperature correction	1	**6.313 800**
Abbemat 3100	nD 1.30 ... 1.66 0 ... 100 %Brix	nD ±0.0001 ±0.05 %Brix	nD 0.0001 0.01 %Brix	20 °C / 25 °C	1	**6.313 801**
Abbemat 3200	nD 1.30 ... 1.72 0 ... 100 %Brix	nD ±0.0001 ±0.05 %Brix	nD 0.0001 0.01 %Brix	15 ... 60 °C	1	**6.313 802** 2

1

1 Circulation thermostat PT31

A.KRÜSS Optronic

The PT31 circulation thermostat is equipped with high performance functions.
The device is ideally suited for applications requiring a temperature range at a constant level.
The robust locking mechanism of the PT31 provides a sturdy connection and ensures constant temperature control of the medium.

- Temperature control using Peltier technology
- Space-saving, sturdy design
- Suitable for operation with non-flammable liquids (water or water/glycol mixture)

Specifications

Temperature range:	8 ... 35 °C
Accuracy:	±0.2 °C
Resolution:	0.1 °C
Pump performance:	20 l/h
Max. pump pressure:	20 mbar
Cooling power:	20 W
Heating power:	30 W
Power supply:	100 ... 240 V AC, 50/60 Hz, 1.3 A
Dimensions (W x D x H):	108 x 145 x 199 mm
Weight:	1.5 kg

Type	PK	Cat. No.
PT31	1	**9.841 515**

2

2 Circulation thermostat PT80

NEW

A.KRÜSS Optronic

The PT80 circulation thermostat is an extremely quiet, energy-efficient and handy device that has been specially developed for small temperature control tasks in the laboratory.
Fast temperature control is also possible due to the low filling volume of only 250 ml.
With an accuracy of ±0.1 °C, the PT80 is ideally suited to high laboratory standards for the temperature control of polarimeters and efractometers. The PT80 is also very well equipped for efficient and environmentally friendly cooling of condensers (e.g. Liebig or reflux conden-sers) in thermal separation processes on a laboratory scale.

- Circulation thermostat with Peltier technology
- Rapid temperature control and high temperature accuracy
- Extremely quiet and low-vibration operation
- Environmentally friendly, due to 50 % lower energy consumption and elimination of refrigerants
- Suitable for operation with non-flammable liquids (water or water/glycol mixture)

Specifications

Temperature range:	5 ... 80 °C
Accuracy:	±0.1 °C
Resolution:	0.1 °C
Pump performance:	60 l/h
Max. pump pressure:	110 mbar
Cooling power at 20 °C:	40 W
Heating power:	120 W
Power supply:	100 ... 240 V AC, 50/60 Hz, 2.5 A
Dimensions (W x D x H):	170 x 244 x 225 mm
Weight:	2.7 kg

Type	PK	Cat. No.
PT80	1	**6.273 831**

3

3 Abbe refractometer ORT 1RS

Kern & Sohn

Universally applicable, analogue table-top Abbe refractometer for use in industry, pharmacy and laboratory.

- Measurement of Brix and refractive index
- Compact and robust design
- For the measurement of liquids, solids and pasty samples
- With digital thermometer

Scope of supply:
Refractometer, calibration solution, calibration block, pipette, screwdriver, cleaning cloth, digital thermometer

Specifications

Measuring temperature:	20 °C
Dimensions (W x D x H):	180 x 90 x 240 mm
Weight:	1950 g

Type	Measuring range	Accuracy	PK	Cat. No.
ORT 1RS	0 ... 95 % / 1.3000 ... 1.7000 nD	0.1 % / 0.0002 nD	1	**4.657 752**

E & OE.

1 Abbe Refractometer Model RMT

Exacta Optech

Laboratory refractometer for precisely measuring liquids, solids, semi-liquids and powders. Optical refraction index and Brix scale reading system, with an excellent boundary line brightness and contrast. Prism with large windows, equipped with movable shrouds to keep out light. Focussable eyepiece.

Standard accessories: Calibrating glass prism, thermometer, dust cover, calibrating screw driver, wooden case.

Specifications

Range:	1.300 to 1.700 nD 0 to 95 % Brix
Precision:	0.001 nD 0.2 % Brix
Thermometer:	0 to 70°C

Type	PK	Cat. No.
RMT	1	**9.801 257**

1

Abbe refractometer AR4/AR2008

A.KRÜSS Optronic

Classic refractometers for solids and liquids. With integrated digital thermometer. Optionally they can be combined with a thermostat.

Specifications

Scales:	Refractive index (nD), Concentration of sucrose (%Brix)
Measuring ranges:	nD 1.3000 ... 1.7200 0 ... 95 %Brix
Accuracy:	nD ±0.0002 ±0.1 %Brix
Light source:	LED
Temperature range:	0 ... 99.9 °C

2 Abbe refractometer AR4

A.KRÜSS Optronic

- Scales can be adjusted manually using the drive knob
- Measured value can be read via an eyepiece
- Temperature is shown on the LCD display
- Optionally: In combination with the circulation thermostat PT31 the temperature can be maintained at 20 °C or 25 °C

Specifications

Dimensions (W x D x H):	100 x 190 x 270 mm
Weight:	2.5 kg
Power supply:	7.5 V

Type	Measuring range	Accuracy	Resolution	PK	Cat. No.
AR4	nD 1.3000 ... 1.7000 0 ... 95 %Brix	nD ±0.0002 ±0.1 %Brix	nD 0.0005 0.25 %Brix	1	**9.801 110**

2

3 Abbe refractometer AR2008

NEW

A.KRÜSS Optronic

- Digital output of the measurement results
- With serial interface
- An automatic temperature compensation for the Brix scale can be optionally connected
- Optional: Measurement of the refractive index within the temperature range of 5 to 80 °C in combination with circulation thermostat PT80

Specifications

Dimensions (W x D x H):	130 x 255 x 290 mm
Weight:	5 kg
Power supply:	115 V/230 V, switchable

Type	Measuring range	Accuracy	Resolution	PK	Cat. No.
AR2008	nD 1.3000 ... 1.7000 0 ... 95 %Brix	nD ±0.0002 ±0.1 %Brix	nD 0.0001 0.1 %Brix	1	**6.055 199**

3

1

1 Digital Abbe refractometer, DR-A1-Plus

ATAGO

Very simple operation, where only the refraction boundary line has to be moved to the measurement cross hairs. The refractometer displays measurements directly (as a refractive index or in Brix (%)) in digits together with temperature.
Measurements can be taken easily by anyone using this refractometer without taking an analogue scale reading in advance. Dispersive value can not be measured using this refractometer.

Specifications

Measurement range:	1.3000 - 1.7100 nD
	0.0 - 100.0 Brix
Resolution:	0.0001 nD
	0.1 % Brix
Accuracy:	0.0002 nD
	0.1 % Brix
Temperature range:	0 to 50.0 °C
Power supply:	a.c. adapter (100 to 240 V 50/60 Hz)
Dimensions:	130 x 290 x 310 mm
Weight:	6.0 kg

Type	PK	Cat. No.
DR-A1-Plus	1	**6.283 092**

2

2 Sucrose (Brix) Standards

Certified stabilized Sucrose (Brix) Standards. *Reagecon*

- ISO17025 accredited
- Uncertainty of measurement of 0.11 % for all Brix values at 20 °C
- Equivalent Nominal Refractive Index values from ICUMSA published tables reported on Certificate of Analysis
- Compatible with any brand of Refractometer
- 12 month shelf life
- Provided in high quality HDPE 15 ml dropper bottles

Brix %	Refractive Index at 20 °C	PK	Cat. No.
0	1.332986nD	1	**6.264 212**
5	1.340264nD	1	**6.265 876**
10	1.347824nD	1	**6.257 923**
15	1.355679nD	1	**6.263 260**
20	1.363842nD	1	**6.264 889**
30	1.381149nD	1	**6.258 368**
40	1.399860nD	1	**7.660 408**
50	1.420087nD	1	**6.258 369**
60	1.441928nD	1	**6.265 875**

3

3 Refractive Index standards

Certified standards with values expressed in Refractive Index (R.I) units nD. *Reagecon*

- ISO 17025 accredited with an uncertainty of measurement up to ±0.00014 nD units at 20 °C
- 12 month shelf life
- Aqueous based
- Compatible with any brand of refractometer
- Convenient high quality 15 ml HDPE dropper bottle

Refractive Index at 20 °C	PK	Cat. No.
1.34325nD	1	**6.265 877**
1.34782nD	1	**7.658 877**
1.37233nD	1	**6.265 878**
1.38115nD	1	**6.258 375**
1.39032nD	1	**6.265 879**
1.40978nD	1	**6.265 142**
1.42009nD	1	**6.258 376**
1.44193nD	1	**6.265 880**

E & OE.

Digital Refractometer/Polarimeter RePo

1

ATAGO

All-in-One refractometer and polarimeter hybrid unit. Only 3 ml sample is needed.
With the press of a button, purity, international sugar scale, specific rotation and concentration can be displayed. Users can also set an upper and lower measurement limit.
An indicator light alerts the user if a measurement value is within the limits.

6.266 905

RePo-1: can measure both brix and optical rotation of the sample.
RePo-1 Package includes: Main unit, 100 ml beaker, 50 x Syringe Filters orange 45, 3 x 20 ml Syringes, 100 x Easy filter.

RePo-2: As RePo-1, additionally the RePo-2 also determines and displays the amount of fructose (%) within HFCS. The RePo-2 is ideal for various industries such as food and beverage, or sugar refining.

RePo-3: As RePo-1, additionally the RePo-3 also determines and displays the amount of invert sugar (%) derived from sucrose. The RePo-3 is ideal for various industries such as sugar refining.

RePo-4: As RePo-1, additionally the RePo-4 also determines and displays the amount of fructose (%) and honey moisture (%). The RePo-4 is ideal for total quality control of honey.

RePo-5: As RePo-1, additionally the RePo-5 can also display the refractive index (nD) of a sample.
The RePo-5 is ideal for quality control in various industries such as fragrances, cosmetics, or pharmaceutical.

Specifications

Measurement range	
Angle of Rotation:	-5 to +5°
Brix (%):	0 to 85 %
Temperature:	15 to 40 °C
Resolution	
Angle of Rotation:	0.01°
Temperature:	0.1 %
Brix (%):	0.1 °C
Accuracy	
Angle of Rotation:	±0.1° (at 20 °C)
Brix (%):	±0.2 %
Temperature:	±1°C
Working temperature:	5 to 40 °C
Wavelength:	589 nm
Power supply:	4 x Size AAA alkaline battery
Dimensions:	101 x 160 x 38 mm
Weight:	325 g
IP code:	IP 67

Type	For	Measuring range	PK	Cat. No.
RePo-1	Sugar	-130 - +130°Z	1	**6.266 905** 1
RePo-1 Package	Sugar	-130 - +130°Z	1	**6.286 462**
RePo-2	Fructose	0,0 - 99,9 %	1	**6.286 463**
RePo-3	Inverted sugar	0,0 - 99,9 %	1	**6.286 464**
RePo-4	Fructose in Honey / Honey (moisture)	0,0 - 99,9 % / 13,0 - 30,0 %	1	**6.286 465**
RePo-5	Refractive index	1,3306 - 1,5050 nD	1	**6.286 466**

2 Polarimeter PL1

2

Exacta Optech

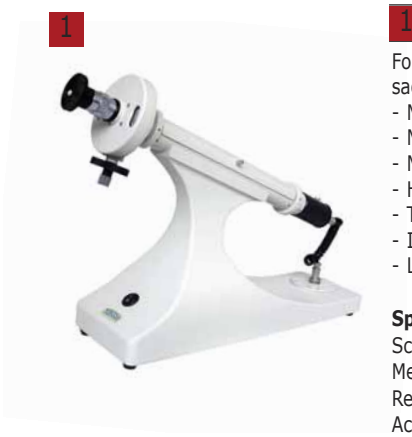
Simple and sturdy instrument to measure the rotation angle of optically active substances. The measure in 180° is directly readable on two mechanical dials.

Light source: LED lamp (589.3 nm)
Polarimetiric Tubes one 100 mm and one 200 mm
Dust cover
Optical Glass Windows (4 pcs)
Rubber seals
Fuses

Range:	0 to 180°
Reading precision:	0.05°

Type	PK	Cat. No.
PL1	1	**9.801 259**

1



1 Polarimeter P1000-LED

NEW

A.KRÜSS Optronic

For basic lab applications and training, for example the experiment on saccharose inversion.
- Measurement of optical rotation according to the half-shade principle
- Manual adjustment on the scale
- Measurement results are read through an eyepiece and two noniuses
- High-performance LED with a service life of 100.000 h
- Tube chamber for tubes with a length of up to 220 mm
- Includes two measurement tubes with a debubbler
- Low-maintenance, cost-effective solution

Specifications

Scale:	Optical rotation (°)
Measuring range:	2 graduated circels (0 ... 180°)
Resolution:	1°
Accuracy:	0.05° (with nonius)
Light source:	1 LED with filter
Wavelength:	589 nm
Dimensions (W x D x H):	140 x 430 x 330 mm
Weight:	4.3 kg
Power supply:	110 ... 250 V, 50/60 Hz

Type	PK	Cat. No.
P1000-LED	1	**6.059 874**

2 Polarimeter P3000

A.KRÜSS Optronic

Technologically high-quality polarimeter for standard applications for which a measurement accuracy of ±0.01° is sufficient and a temperature control can be omitted. Typically, the P3000 is used in the quality control of food industry.

- Measurement of optical rotation
- Very short measurement time of approx. 1 s
- Easy, menu-driven adjustment
- Display of measured values in optical rotation or international sugar scale
- Suitable tubes for any type of sample
- Measurement up to an optical density of 3.0
- Temperature measurement with calibratable temperature sensor
- Reliable temperature compensation
- Chemical-resistant measurement tubes
- Compliance with GMP/GLP, pharmacopoeias [USP, BP, JP, Ph. Eur. (with tempering)], FDA, ISO, HACCP, OIML, ASTM, ICUMSA, NIST

Specifications

Scales:	Optical rotation [°], int. sugar scale [°Z]
Measuring range:	±90° ±259 °Z
Resolution:	0.01° 0.01 °Z
Accuracy:	±0.01° ±0.01 °Z
Measuring time:	approx. 1 s (±90°)
Light source:	1 LED with filter
Wavelength:	589 nm
Temperature range:	0 ... 99.9 °C
Resolution:	0.1 °C
Accuracy:	±0.2 °C
Dimensions (W x D x H):	640 x 360 x 200 mm
Weight:	28 kg
Power supply:	100 ... 250 V, 50/60 Hz

Type	PK	Cat. No.
P3000	1	**9.801 190**

2

E & OE.

Spectrophotometer Libra S4+ Vis/S6+ Vis

Biochrom Ltd.

These universal spectrophotometers are designed for a variety of applications in education, quality control and routine laboratories. They measure absorbance, transmission and concentration as well as simple kinetics. The large display allows to view the results in numerical as well as in graphical form. Stored methods can also be locked by using a pin protected password, as well as unlocked and deleted.
The PVC (Print Via Computer) software is included with the instrument and providing the user with the option to transfer data directly to a PC. Data can be easily stored on a USB memory stick and analyzed at a later date.

- Large LC display
- Interfaces for PC and USB stick
- Simple operation
- Small, lightweight device

1 Spectrophotometer Libra S4+ Vis

1

Biochrom Ltd.

Ideal instrument for education and QC laboratories.
Compact and lightweight for simpler applications.
Up to 72 methods can be stored, providing a fast and easy way to recall frequently used methods.

Scope of supply:
Libra S4+, PVC software (Print Via Computer), data cable USB to PC, starter pack of 8 disposable cuvettes

Specifications

Optical system:	Single beam
Wavelength range:	325 ... 1100 nm
Accuracy:	±2 nm
Reproducibility:	±1 nm
Photometric range:	-0.300 ... 2.500 A
Accuracy:	< 0.002 A to 0A at 546 nm
Reproducibility:	< 0.002 A to 0A at 500 nm
Stray light:	< 1 %T at 340 nm
Light source:	Tungsten halogen
Outputs:	Export to PC with USB cable, USB memory stick
Dimensions (W x D x H):	325 x 225 x 133 mm
Weight:	1.6 kg
Power supply:	90-265 V, 50/60 Hz

Type	PK	Cat. No.
Libra S4+	1	**4.668 614**

2 Spectrophotometer Libra S6+ Vis

2

Biochrom Ltd.

Fulfils the requirements of routine spectroscopy. Small and lightweight instrument with many functions. It also includes sorted methods for Bradford, BCA, Biuret and Lowry assays.
Up to 90 methods can be stored, providing a fast and easy way to recall frequently used methods.

Scope of supply:
Libra S6+, PVC software (Print Via Computer), data cable USB to PC, starter pack of 8 disposable cuvettes

Specifications

Optical system:	Single beam
Wavelength range:	325 ... 1100 nm
Accuracy:	±2 nm
Reproducibility:	±1 nm
Photometric range:	-0.300 ... 2.500 A
Accuracy:	< 0.002 A to 0A at 546 nm
Reproducibility:	< 0.002 A to 0A at 500 nm
Stray light:	< 1 %T at 340 nm
Light source:	Tungsten halogen
Outputs:	Export to PC with USB cable, USB memory stick
Dimensions (W x D x H):	325 x 225 x 133 mm
Weight:	1.6 kg
Power supply:	90-265 V, 50/60 Hz

Type	PK	Cat. No.
Libra S6+	1	**4.668 615**

Spectrophotometer LLG-uni*SPEC* 2 and 4

1

6.263 610

2

6.263 620

High-quality and cost-efficient UV/VIS spectrophotometers for pharmaceutical, biochemical and clinical lab applications. Suitable for different measurement types such as kinetics, wavelength scans, quantitative analysis, multi-wavelength and DNA/Protein analysis.

Available in two versions:
LLG-uni*SPEC* 2 for standard routine measurements and uni*SPEC* 4 suitable for complex measurements e.g. required for quality controls. LLG-uni*SPEC* 4 features a small band width and a high wavelength accuracy. Both units can store and save 200 calibration curves. A pre-adjusted lamp design allows a fast and easy lamp replacement. Both lamps can be individually turned on/off to extend the durability. Both versions can be used either as stand-alone units or can be operated via a PC by using the supplied software.

- Single beam system, grid with 1200 lines/mm
- Silicon photodiode detector
- Parallel port for printer output
- USB port
- 4 position cell holder (10 mm) included
- Additional cell holders optionally available
- LCD display
- Deuterium and tungsten lamp
- Automatic wavelength adjustment

Scope of supply: LLG-uni*SPEC* 2 or 4 Photometer, software for connection to PC, 4 glass cells and 2 quartz cells.

Specifications	**LLG-uni*SPEC* 2 // LLG-uni*SPEC* 4**
Optical System:	Single beam, Grating 1200 lines/mm, Silicium photodiode detector
Wavelength range:	190 to 1100 nm
Bandwidth:	2 nm // 1.8 nm
Wavelength accuracy:	±0.5 nm // ±0.3 nm
Wavelength repeatability:	0.3 nm // 0.2 nm
Wavelength setting:	automatic
Photometric accuracy:	±0.5 % T // ±0.3 % T
Photometric repeatability:	0.3 % T // 0.2 % T
Photometric range:	-0.3-3 A, 0-200 % T, 0-9999 C
Stability:	±0.002 A/h at 500 nm
Stray light:	≤0.1 %T // ≤0.05 %T at 220 nm, 360 nm
Data output:	USB port
Printer port:	parallel port
Display:	128 x 64 Dots LCD // 320 x 240 Dots LCD
Standard cell holder:	4-position 10 mm cell changer
Lamps:	D2 lamp and W lamp
Dimension (W x D x H):	460 x 360 x 225 mm // 625 x 430 x 206 mm
Weight:	18 kg // 28 kg
Power supply:	220 V/50 Hz or 110 V/60 Hz
Warranty:	3 years

Type	Plug type	PK	Cat. No.
LLG-uni*SPEC* 2	EU	1	**6.263 610** 1
LLG-uni*SPEC* 2	UK	1	**6.263 611**
LLG-uni*SPEC* 4	EU	1	**6.263 620** 2
LLG-uni*SPEC* 4	UK	1	**6.263 621**

Accessories for Spectrophotometer LLG-uni*SPEC* 2/LLG-uni*SPEC* 4

Description	PK	Cat. No.
Cuvette holder for 4 cuvettes 50 mm and 100 mm	1	**6.266 530**
Cuvette holder, adjustable for 1 micro-cuvette	1	**6.263 617**
Tungsten lamp	1	**6.263 615**
Deuterium lamp	1	**6.263 616**
Circuit board power supply for LLG-uniSPEC 2	1	**6.263 618**
Circuit board photometer for LLG-uniSPEC 2	1	**6.263 619**
Spare keypad display for LLG-uniSPEC 2	1	**6.263 625**
Spare circuit board for LLG-uniSPEC 2	1	**6.263 626**
Cuvette holder, manual for 8 cuvettes, 10 mm	1	**6.263 627**
Foil keypad for LLG-uniSPEC 2	1	**6.263 628**

E & OE.

Spectrophotometer Models 6300 VIS/6305 UV-VIS

1

Jenway

Models 6300 and 6305 are general purpose visible and UV/Visible range spectrophotometers which are suited to a wide range of applications in education and quality control.

- Simple operation
- Versatile sampling system
- G.L.P. compliant
- Full interfacing capability
- Simple keypad and operating protocols designed to enable reliable operation by unskilled operators
- LCD gives simultaneous readout of wavelength and photometric result
- Error messages, prompts, mode indication and a choice of concentration units are presented in an easily understood format
- Cuvette holder allows 10 mm to 100 mm cells
- 3 year warranty

9.775 411

Supplied with: Mains lead, pack 100 disposable cuvettes, 10 x 10mm cell holder, PC Application Software on CD-ROM and operating instructions.

Various accessories e.g. sipper pump, cells, cell holders, cuvettes and lamps available on request.

Specifications

Optical system:	Single beam
Wavelength	
Range:	198 to 1000 nm (6305) 320 to 1000 nm (6300)
Resolution:	1 nm
Accuracy:	±2 nm
Bandwidth:	8 nm, 6 nm over UV range
Transmittance	
Range:	0 to 199.9 %
Resolution:	0.1 %
Stray light:	<0.5 % at 340 & 220 nm
Accuracy:	±1 %
Absorbance	
Range:	-0.300 to 1.999 A
Resolution:	0.001 A
Concentration	
Range:	-300 to 1999
Resolution:	0.1/1
Units:	ppm, mg/l, g/l, M, blank %
Outputs:	analogue (0 to 1999 mV d.c.) RS232 serial port
Light Source:	Xenon flash lamp module (6305) Tungsten halogen (6300)
Dimensions (W x D x H):	365 x 272 x 160 mm
Weight:	6 kg
Supply requirements:	230 V/50 Hz

Type	PK	Cat. No.
6300 VIS	1	**9.775 412**
6305 UV-VIS	1	**9.775 411** 1
Adjustable path length cuvette holder for 10 mm to 100 mm cuvettes	1	**9.775 430**

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6.283 459

Scanning Spectrophotometers Series 72, VIS and UV-Vis

Jenway

Scanning spectrophotometers from Jenway for measurements in the visible and UV range.
Model 7200 (VIS): wavelength range of 335 to 800 nm with a spectral bandwidth of 7 nm.
Model 7205 (UV-VIS): wavelength range of 198 to 800 nm with a spectral bandwidth of 5 nm.

Both spectrophotometers are ideal for a variety of applications in education and routine testing in clinical, veterinary, pharmaceutical and QC laboratories.

The 72 series spectrophotometers offer measurement modes for single wavelength with basic absorbance and % transmittance; concentration determination (via reference standards or calibration curves with up to 6 standards), full spectrum scanning and kinetics for up to 3 simultaneous wavelength measurements.

The colour touchscreen user interface provides fast and easy set up and navigation of the instrument.
The 4" display allows full spectrum scans, quantitation curves and kinetics runs to be viewed easily.
The sample chamber lid can also be left open during measurements which is ideal for samples in tall test tubes.

Including two USB ports for data storage and printer connectivity.

Optional heated 10x10 mm cuvette holder for thermostated measurements at 37 °C.
More accessories available on request.
- Scanning diode array detector (DAD)
- Colour Touchscreen navigation
- Small footprint and lightweight
- Fast scan speed
- Multiple USB ports for data storage and printer connectivity
- 2 year warranty on the instrument

Specifications

Optical system:	Single beam
Wavelength Range:	
7200 (VIS):	335 to 800 nm
7205 (UV-VIS):	198 to 800 nm
	±2 nm
Resolution	±2 nm
Repeatability	
Spectral bandwidth:	
7200 (VIS):	7 nm
7205 (UV-VIS):	5 nm
Photometric range:	-0.300 to 2500 A
Accuracy:	±0.01 A at 1.0 A and 546 nm
Stability:	±0.005 A/h bei 0.04 A und 546 nm
Stray Light at 340 nm, %T:	< 1 % T acc. ANSI/ASTM E387-72
Concentration range:	±2500
Quantitation:	±2500
Kinetics:	15 bis 99999 s
Light source:	
7200 (VIS):	Tungsten halogen lamp
7205 (UV-VIS):	Xenon Lamp
Outputs:	2 x USB
Dimension (W x D x H):	212 x 422 x 120 mm
Weight:	2.8 kg
Power supply:	100-240 V, 50/60 Hz
Warranty:	2 Years

Description	PK	Cat. No.
Spectrophotometer 7200 (VIS)	1	**6.283 459** 1
Spectrophotometer 7205 (UV-VIS)	1	**6.286 777**
Cell holder, 10 x 10 mm	1	**6.283 460**

E & OE.

1 Spectrophotometer Model 6850

Jenway

Double beam spectrophotometer with a variable spectral bandwidth. The highly stable optics and two detectors measure the sample and reference simultaneously optimising measurement accuracy. The 6850 has measurement modes for photometrics, concentration, multi-wavelength, spectrum scanning, kinetics, quantitation, DNA/RNA and protein analysis. Jenway Prism PC software is supplied as standard and offers additional functionality with preloaded methods for DNA/RNA and protein analysis, as well as extensive post-measurement tools, unlimited results saving and easy export of data. The 6850 double beam spectrophotometer is ideal for quality control, general research, pharmaceutical, biochemical and clinical laboratory applications. Installation Qualification and Operation Qualification (IQ/OQ) is available for the 6850.

- Double beam spectrophotometer with highly stable optics
- Variable spectral bandwidth 0.5, 1, 2, 4, 5 nm
- Analysis: Auto peaks and valleys, zoom, addition, subtraction, peak ratios, smoothing, area under curve, wavelength table, derivatives, overlay with PC software
- Integrated user interface
- USB port for data storage
- Conforms to European Pharmacopeia requirements
- Jenway Prism PC software included as standard
- 1 year warranty

Specifications

Optical system:	Double beam
Wavelength range:	190 to 1100 nm
Resolution:	0.1 nm
Accuracy:	±0.3 nm (at 0.5 and 1 nm bandwidth) ±0.5 nm (at 2, 4 and 5 nm bandwidth)
Reproducibility:	±0.2 nm
Photometric range:	-0.3 to 3.0 A 0 to 200 %T
Accuracy:	±0.002 A (0 to 0.5 A) ±0.3 % T (0 to 100 %T)
Reproducibility:	±0.001 Abs (0 to 0.5 Abs) ±0.002 Abs (0.5 to 1.0 Abs)
Resolution:	0.1 %T, 0.001 A
Stray light:	< 0.05 %T at 220 and 360 nm
Concentration range:	0 to 99999
Quantitation points:	Up to 3 wavelengths
Kinetics:	Up to 12 h with time intervals of 0.1, 0.2, 0.5, 1, 2, 5, 10 or 30 s
Spectrum:	Any range between 190 and 1100 nm
Scan Speed:	100 to 2000 nm/min
Scan interval:	0.1, 0.2, 0.5, 1, 2 or 5 nm
Light source:	Tungsten and Deuterium lamp
Outputs:	USB and parallel
Dimensions (W x D x H):	600 x 450 x 200 mm
Weight:	22 kg
Supply requirements:	230 V, 50/60 Hz

Type	PK	Cat. No.
6850	1	**9.775 454**

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1 Spectrophotometer BioDrop DUO

Biochrom Ltd.

Biodrop Duo is a service-free bench-top instrument with a cuvette holder and a micro-volume sample port. The port enables absorption measurements in just 0.5 µl sample volume without cuvettes. Ideal for rapid serial measurements of DNA, RNA or proteins. The cuvette holder offers the possibility for measurements with larger volumes with conventional 10 mm cuvettes. The instrument has a large colour touchscreen and preprogrammed applications for the measurement of DNA, RNA, oligos and proteins. Generated data can be stored internally or transferred from the instrument using a USB flashdrive. The photometer can be operated with a PC and the supplied BioDrop Resolution Software via a USB connection. A built-in printer can also be selected for a complete stand-alone solution.

- Micro-volume sample port for minimum sample volume
- High-resolution, colour touchscreen
- Software package with preprogrammed methods for sample analysis
- USB connection for PC control and data export
- No calibration needed
- Easy cleaning of the sample port with a lint-free tissue

Specifications

Maximum concentration dsDNA:	2500 ng/µl
Detection limit:	1 ng/µl
Absorbance range:	0.3 to 2.5 A (0.3 A to 50 A, 10 mm equivalent)
Absorbance accuracy:	±0.005 A or 1 % of the reading, whichever is the greater at 546 nm
Spectral bandwidth:	5 nm
Stray light:	<0.5 %T at 220 nm and 340 nm using $NaNO_2$
Wavelength range:	190 bis 1100 nm
Wavelength accuracy:	±2 nm
Light source:	Pulsed Xenon lamp
Dimensions (W x D x H):	260 x 420 x 185 mm
Weight:	3 kg
Power supply:	90-250 V, 50/60 Hz, max 50 VA

Description	PK	Cat. No.
BioDrop DUO	1	**6.313 967**
BioDrop DUO with printer	1	**6.313 968**

2

2 Spectrophotometer 7415 nano

Jenway

For accurate, fast and reproducible measurement of sample volumes from 0.5 µl to 5 µl. Programmed for the measurement of nucleic acid concentration and purity as well as protein assays. The direct application of the sample on the measuring head eliminates the need for cuvettes or sample dilution. Single measurements are performed in less than 6.5 seconds. Fast cleaning of the measuring optics simply by wiping off. Customized Android-based user interface to control the instrument, set measurement modes and retrieve results. Ethernet and USB interfaces for transfer of results, updates and printer connection as well as networking with cloud services.

- Ideal for DNA, RNA and protein determination
- Only 0.5 µl sample volume required
- For DNA concentrations up to 2 ng/µl
- 7" color touch screen
- Multilingual user interface
- 10 GB internal memory for methods and results
- 3 years warranty, also on the xenon lamp
- Stainless steel measuring head with quartz lens

Specifications

Wavelength range:	198 ... 1000 nm
Wavelength accuracy:	±2 nm
Spectral bandwidth:	5 nm
Absorbance accuracy:	±0.01 at 1.0 A
Transmittance range:	0 ... 199.9 %
Concentration range:	2 ... 6000 ng/µl dsDNA
DNA measurement modes:	dsDNA, ssDNA, RNA, Oligonucleotides, 260/280, 260/230, variable ratio
Protein measurement modes:	BCA, Bradford, Lowry, Biuret, direct UV
Light source:	Xenon lamp
Dimensions (W x D x H):	275 x 400 x 220 mm
Weight:	7.7 kg
Power supply:	100 ... 240 V, 50 ... 60 Hz

Type	PK	Cat. No.
7415 Nano	1	**4.664 027**

E & OE.

Densitometer DEN-1/DEN-1B

Grant

Compact and efficient benchtop densitometers for measuring turbidity of cell suspensions in a variety of life science applications. The densitometers are designed and factory calibrated to measure turbidity in the range of 0.3 to 5.0 McFarland units (DEN-1) 0.00 to 6.00 McFarland units (DEN-1B) with a small standard deviation.
If required, they can deliver a wider measurement range (up to 15.00 McFarland units), but with a greater standard deviation.

Specifications

Light source:	light diode
Wavelength:	565 nm ±15 nm
Measuring range DEN-1:	0.3 to 15.0 McF
Measuring range DEN-1B:	0.0 to 15.0 McF
Standard deviation at 3.00 McF units:	±0.1 McF
Precision:	±3 %
Measurement time:	1 sec
Tubes diameter, external:	18 mm
Tube diameter with D16 adapter (included):	16 mm
Sample volume:	≥2 ml
Dimensions (W x D x H):	165 x 115 x 75 mm
Power supply:	12V (DEN-1B additionally 3 x AAA batteries)

Type	Description	PK	Cat. No.	
DEN-1		1	**6.234 576**	1
DEN-1B		1	**9.721 057**	2
DEN MCF STDS	Set of 5 reference standards (0.5/1.0/2.0/3.0/4.0)	1	**6.237 141**	

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6.234 576

2

9.721 057

3 Densitometer WPA CO8000, Cell density meter

NEW

Biochrom Ltd.

The single-beam cell density meter measures the optical density at 600 nm using an LED. This LED light source has a long life span and requires little maintenance.
The CO8000 is a robust, easy to use instrument dedicated to the measurement of the density of cells in suspension such as E.coli, yeast cells and other cell cultures. Once all measurements have been completed, up to 99 results can be displayed on the easy-to-read screen.

- Small, portable size
- Stores up to 99 results
- Rechargeable battery
- Easy to use, clean and sterilise
- No warm up time

3

Specifications

Optical system:	Single beam
Wavelength:	600 nm
Photometric range:	-0.3 ... 1.99 A
Accuracy:	±0.02 A at 1 A
Reproducibility:	0.02 A at 1 A in 10 mm cuvette
Stray light:	< 1 %T
Light source:	LED
Outputs:	Store, *Print, *Export to PC (*optional)
Dimensions (W x D x H):	150 x 180 x 60 mm
Weight:	0.6 kg
Power supply:	110-220 V, 50/60 Hz, 20 VA

Type	PK	Cat. No.
WPA CO8000	1	**4.668 624**

Accessories for Densitometer WPA CO8000

NEW

Biochrom Ltd.

Description	PK	Cat. No.
Adaptor set for 10 and 12 mm tubes	1	**4.668 629**
Serial cable	1	**4.668 630**

1 Microplate Reader EZ Read 400

The EZ Read range provides a comprehensive range of robust, fast and accurate microplate readers for absorbance assays. They come in several application focused models. *Biochrom Ltd.*

Applications:
- Measures flat, round and v-bottomed 96-well microplates with standard SBS footprints
- Accurate measurements ensured by automatic lamp calibration prior to each reading
- USB 2.0 PC connection
- Create new plate layouts
- Add multiple assays to a plate
- Add multiple plates per analysis
- Easy to create new methods
- Select only the data you want for data reporting
- Windows 7 and 8 compatibility as well as older Windows OS from XP
- So easy you will not need to export your data into Excel

EZ Read 400 ELISA: ELISA assays
EZ Read 400 Research: ELISA, total protein and cell proliferation assays.
The EZ Read 400 microplate readers are PC-controlled using intuitive Galapagos software to simplify data acquistion and analysis.
Further EZ Read models on request.

Specifications

Detection System:	Single channel silicon photodiode
Optical System/Wavelength Selection:	filters
Wavelength Range:	400 to 750 nm
Measuring Range:	0 to 3.3 OD
Accuracy:	0.5 % from 1.0 OD at 450 nm
Reproducibility/Precision:	0.25 % from 1.0 OD at 450 nm
Linearity:	0.25 % from 0.1 to 2.5 OD at 492 nm
Reading Speed:	25 seconds
Dimensions (W x D x H):	315 x 182 x 435 mm
Power supply:	100-240 V, 50/60 Hz, 1.5 A

Type	UV filters nm	Measuring mode	PK	Cat. No.
EZ Read 400 Elisa	405, 450, 492, 620	NPP, OPD, Slow TMB, Turbo TMB, Ultra TMB	1	**4.658 171**
EZ Read 400 Research	405, 450, 492, 562, 570, 595, 620, 650	NPP, OPD, Slow TMB, Turbo TMB, Ultra TMB, Bradford, BCA, Lowry, MTT, XTT, Cell density	1	**4.658 176**

Further models can be found in our online shop.

1

2

2 Microplate Reader 800 TS

The 800 TS with high-resolution colour touchscreen is designed for applications within the clinical and life science research laboratory. Its compact footprint and proven robust design makes it an ideal solution for many microplate-based assays. *BioTek Instruments*

- Reliable 1-channel Absorbance Microplate Reader for endpoint, kinetic and well scanning read modes
- Compatible with 6 to 384-well formats
- Wavelength range: 400-750 nm or 340-750 nm
- Filter wheel capacity: 5 positions, up to 5 filters supplied
- Dynamic range: 0.0 to 4.0 OD, Resolution: 0.0001 OD
- Easy-to-use Gen5 Data Analysis Software for easy data collection, analysis, export and printing

Typical Applications: ELISA, protein quantification and cytotoxicity assays.

Type	Description	Filter nm	Measuring range nm	PK	Cat. No.
800TS	6- to 96-well plates, shaking	405, 450, 490, 630	400 ... 750	1	**6.287 397**
800TSUV	6- to 96-well plates, shaking	340, 405, 450, 490, 630	340 ... 750	1	**6.287 398**
800TSUVI	6- to 96-well plates, shaking and temperatur control (50°C)	340, 405, 450, 490, 630	340 ... 750	1	**4.674 974**
800TSNB	6- to 384-well plates, terasaki plates	405, 450, 490, 630	400 ... 750	1	**4.674 970**

E & OE.

1 Microplate Reader ELx808

1

BioTek Instruments

High quality optics, fast measurement and superior incubation are the hallmarks of the ELx808 Absorbance Microplate Reader. These and other top features make it suitable for a wide array of applications, from endpoint ELISAs to kinetic cell growth studies.

- 8-channel Absorbance Microplate Reader for endpoint, kinetic and linear well scanning read modes
- Compatible with standard 96-well, flat- or round-bottom plates
- Wavelength range: 380-900 nm; 340-900 nm (ELx808IU)
- Filter wheel capacity: 6 positions, up to 5 filters supplied
- Dynamic range: 0.0 to 4.0 OD
- Linear shaking and 4-Zone incubation to 50 °C (ELx808IU)
- Easy-to-use Gen5™ Data Analysis Software for rapid data collection, export and printing

Typical applications: ELISA, enzyme kinetics, protein assay, endotoxin (LAL) assays, cell growth studies and agglutination assays.

Type	Filter nm	Measuring range nm	PK	Cat. No.
ELx808	405, 450, 490, 630	380-900	1	**6.283 100**
ELx808IU	340, 405, 450, 490, 630	340-900	1	**6.283 101**

2 Micro-Volume Plate Take3

2

BioTek Instruments

Nucleic acid and protein quantification is fast and easy with the Take3 Trio Micro-Volume plate, used in BioTek microplate spectrophotometer. Up to sixteen 2 µl samples can be measured at a time, without dilution or additional specialized equipment.

- Compatible with Epoch, Synergy and Cytation readers from BioTek
- 16 microspots for 2 µl samples, 1 location for standard cuvette and 2 locations for BioCell™ measurements
- Pre-programmed DNA, RNA and protein protocols in Gen5 make quantification fast and easy
- Easy routine cleaning using laboratory wipe

Typical Applications: -Micro-volume DNA, RNA and protein quantification, Spectral scanning in micro-volume, cuvette or BioCell™.

Type	PK	Cat. No.
Micro-Volume Plate Take3	1	**6.283 109**

3 Microplate Spectrophotometer Epoch

3

BioTek Instruments

Epoch™ is a monochromator-based microplate spectrophotometer that offers superior functionality at an accessible price. Controlled by the easy-to-use Gen Data Analysis Software, Epoch is designed for a wide range of applications, from nucleic acid and protein quantification to cell-based assays and ELISAs.

- Spectrophotometer for single, dual and multi-wavelength measurements in endpoint and kinetic read, as well as spectral and well area scanning
- Wavelength range: 200 - 999 nm, selectable in 1 nm increments
- 6- to 384-well plate reading capability
- Xenon flash lamp to last the instrument's lifetime
- Robust housing design for longevity even under heavy usage
- Full Gen5 Data Analysis Software for data collection, export and printing included
- Compatible with Take3 Plate for direct nucleic acid and protein quantification in up to sixteen 2 µL samples at a time

Typical Applications: ELISA, nucleic acid quantification, DNA purity measurements, protein quantification, cytotoxicity, cell proliferation and spectral scanning.

Type	PK	Cat. No.
EPOCH	1	**6.283 693**

1

1 Microplate washer CAPPWash

NEW

AHN

The microplate washer is ideal for small scale work. It can be purchased individually or as a set, including all components necessary for the set up. The Two-in-One Design of Capp elisa plate washer offers two functions: add the washing solution to the well and aspiration of the used solution back to the waste collection bottle.

- Produced from stainless steel and polypropylene
- Resistant to aggressive chemicals

Scope of supply:
CAPPWash kit 8 channel: Plate washer 8 channel, vacuum pump 230V, bottle for washing solution (5 l), waste collection bottle (2 l), vacuum trap, silicon tubing (3 m)
CAPPWash kit 12 channel: Plate washer 12 channel, vacuum pump 230V, bottle for washing solution (5 l), waste collection bottle (2 l), vacuum trap, silicon tubing (3 m)

Type	PK	Cat. No.
CAPPWash 8 channel	1	**4.671 829**
CAPPWash 12 channel	1	**4.671 830**
CAPPWash kit 8 channel	1	**4.671 831**
CAPPWash kit 12 channel	1	**4.671 832**

2

2 Microplate washer Atlantis 2/4

NEW

Biochrom Ltd.

Microplate washer for 96-well plates with flexiblility in washing options, simple operation and digitally controlled aspiration and dispensing pumps.

- 8-channel manifold
- Up to 50 wash programmes
- Auto rinse function prevents clogging
- Reduced aerosols due to cover and pumping technology
- Low noise, pressure-free aspiration and dispensing pumps
- Detachable plate carrier for easy cleaning

Scope of supply:
Atlantis 2: With 2 liquid lines, two 2 l wash-bottles, 2.5 l waste-bottle
Atlantis 4: With 4 liquid lines, four 2 l wash-bottles, 2.5 l waste-bottle
Maintenance kit: 2 x T 2.5 A spare fuses, 2 cleaning needles, tubing sets for all bottles, cleaning tool for needles, tubing set for manifold, spare tubing set for manifold

Type	PK	Cat. No.
Atlantis 2	1	**7.971 823**
Atlantis 4	1	**6.315 207**
Maintenance kit	1	**6.315 189**

3

3 Microplate Washer 50 TS

BioTek Instruments

The 50 TS Microplate Strip Washer is a truly flexible platform that provides washing capabilities unsurpassed in its class. As a welcome upgrade from manual processing, the 50 TS is ideally suited for academic, clinical and veterinary diagnostic laboratories.

- Compact and robust microplate strip washer with 8-, 12- or 16-tube washing manifold
- Compatible with 96/384 well plates or single strips
- Integrated syringe pump for precise control over all fluid flow rates
- Automatic buffer switching for up to 3 wash buffers
- Total programming control for all wash parameters, like number of cycles, dispense volume, dispense rate, aspiration rate, etc. via touchscreen user interface
- Programmable shaking duration and intensity
- Many built-in maintenance programs

Typical Applications: ELISA assays, Cell-based assays

Type	Description	PK	Cat. No.
50TS8	with 8-tube washing manifold, 96 well	1	**6.287 399**
50TS12	with 12-tube washing manifold, 96 well	1	**6.287 400**
50TS16	with 16-tube washing manifold, 96/384 well	1	**4.674 978**
50TS8V	with 8-tube washing manifold, 96 well, buffer switching option	1	**6.287 401**
50TS12V	with 12-tube washing manifold, 96 well, buffer switching option	1	**6.287 402**
50TS16V	with 16-tube washing manifold, 96/384 well, buffer switching option	1	**4.674 973**

E & OE.

Colorimeters, Lovibond® PFXi series

Lovibond®

The PFXi series of spectrophotometric colorimeters introduces a unique concept in liquid colour control: RCMSi technology (Remote Calibration & Maintenance Service via internet).
Users can benefit from the capability for remote calibration and servicing via the internet - eliminating any costs and time delays associated with servicing and guaranteeing compliance with standards. The PFXi range is supplied with a full range of colour scales for specific markets including, but not limited to, Petroleum, Edible Oils, Pharmaceuticals, Brewing and Honey. Users can upgrade scales remotely at any time. Every PFXi is supplied with colour control software for data analysis (LAN & USB cable provided). Optical glass cells, a certified glass calibration filter, a spare lamp and user instructions included. The PFXi-880 and -995 series are available with an optional integrated heater unit. (This is not available for the PFXi-195). This is a critical feature when dealing with materials such as fats and waxes where temperature needs to be maintained at a constant temperature +10°C above the "Cloud Point" of the material.
Please Note: CIE values and spectral data readings are standard on all the instruments listed below.

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9.947 280

Type	For	Colour scale	PK	Cat. No.
PFXi-195/1	Chemicals & Industrial Oils	Pt-Co/Hazen/APHA, Gardner, Iodine	1	**9.947 280**
PFXi-195/2	Petroleum Oils & Waxes	Saybolt, ASTM Color, Pt-Co/Hazen/APHA	1	**9.947 281**
PFXi-195/4	Beers, Malts & Caramels	EBC (CIE & 430nm), ASBC (CIE & 430nm), Series 52	1	**9.947 282**
PFXi-195/5	Pharmaceutical Solutions	European & US Pharmacopoeia, Pt-Co/Hazen/APHA	1	**9.947 283**
PFXi-880/L	Oils and Fats	Lovibond ® RYBN	1	**9.947 284**
PFXi-880/P	Fuels and Waxes	Saybolt, ASTM Color	1	**9.947 285**
PFXi-995	Transparent Samples	Lovibond ® RYBN, AOCS-Tintometer®, Gardner, Saybolt, Kreiss, Hess-Ives, Hunter Lab, Iodine colour, Pt-Co/Hazen/APHA	1	**9.947 286**
PFXi-995/P	Petroleum Oils and Waxes	Saybolt Colour, ASTM Colour, Pt-Co/Hazen/APHA Colour, Gardner Colour, Lovibond® RYBN, IP Units	1	**9.947 287**

2 Cells W600

Lovibond®

Cells made of optical glass or Borosilicate glass 3.3, 21 mm x 40 mm, for instument Models Fs, PFXi/PFX195, 880, 950 and 995.
(Note: PFXi/PFX-195 max. path length 50 mm).

W600/OG/xx for unheated samples (up to 40 °C)
W600/B/xx for heated samples (up to max. 100 °C)

Further versions available on request.

2

Type	Path length mm	Material	PK	Cat. No.
W600/OG/10	10	optical glass	1	**6.207 120**
W600/OG/½"	12.7	optical glass	1	**9.947 341**
W600/OG/25	25	optical glass	1	**6.241 234**
W600/OG/1"	25.4	optical glass	1	**9.947 342**
W600/OG/33	33	optical glass	1	**6.093 322**
W600/OG/50	50	optical glass	1	**6.207 119**
W600/OG/100	100	optical glass	1	**6.235 055**
W600/OG/5¼"	133.35	optical glass	1	**9.947 343**
W600/B/10	10	Borosilicate glass 3.3	1	**6.241 927**
W600/B/1"	12.7	Borosilicate glass 3.3	1	**9.947 344**
W600/B/33	33	Borosilicate glass 3.3	1	**6.086 921**
W600/B/100	100	Borosilicate glass 3.3	1	**6.253 940**
W600/B/5¼"	133.35	Borosilicate glass 3.3	1	**9.947 345**

3 Cells W680

Lovibond®

Cells made of optical glass 17 mm x 75 mm, for Comparator 2000+ and Comparator 3000 using unheated samples (up to 40 °C).

Further versions available on request.

3

Type	Path length mm	PK	Cat. No.
WG680/OG/10	10	1	**9.600 781**
WG680/OG/33	33	1	**6.093 260**
W 680/OG/40	40	1	**9.600 784**
WG680/OG/20	20	1	**4.672 166**
WG680/OG/25	25	1	**9.600 782**
WG680/OG/50	50	1	**4.672 157**
W 680/OG/2,5	2.5	1	**9.947 172**
W 680/OG/5	5	1	**9.947 173**

1 Flame Photometer PFP7 and PFP7/C

Jenway

Single channel, low temperature flame photometer for use in industry, medicine and education.
Can be operated with propane, butane, natural gas or liquid gas (LPG).
With built-in electronic flame failure safety system for operational safety.

- Model PFP7 incl. Na, K, Ca, Ba and Li filters
- Model PFP7/C incl. Na, K and Li filters
- 3 year warranty

Supplied with: Na, K, Li filters (model PFP7/C), additionally Ba and Ca filter (model PFP7), connecting hoses and clips, compressor plug, drain trap, fuses and operating/service instructions

Specifications

Range PFP7:	0 ... 199.9 ppm
Range PFP7/C:	120 ... 160 ppm Na, 0 ... 10 ppm K
Limits of detection	
Na/K:	< 0.2 ppm
Li:	< 0.25 ppm
Ca:	< 15 ppm
Ba:	< 30 ppm
Reproducibility:	< 1 % (Coefficient of variation for 20 consecutive samples using 10 ppm Na set to a reading of 50)
Linearity:	< 2 % (when concentration of 3 ppm Na/K and 5 ppm Li are set to a reading of 100)
Specificity:	Interference from Na, K and Li equal in concentration to test element will be < 0.5 %
Recorder output:	Nominal 1.00 V for a reading of 100.0
Air:	6 l/min at 1 Kg/cm² /14psi (oil and moisture free pressurised air)
Dimensions (W x D x H):	420 x 360 x 300 mm
Weight:	8 kg
Power supply:	190 ... 250 V, 50/60 Hz

Type	PK	Cat. No.
PFP7	1	**9.309 409**
PFP7/C	1	**6.272 846**
Air compressor	1	**9.309 410**

1

2

2 Accessories to Flame Photometer PFP7

Jenway

Please Note: These products will only operate with the correct type of air compressor and gas regulator as specified below.

Description	PK	Cat. No.
Air compressor	1	**9.309 410**
Butane regulator	1	**9.309 411**
Propane regulator	1	**9.309 412**
Water separator (small)	1	**9.309 419**
Water separator (large)	1	**9.309 420**
Dust cover	1	**9.309 421**
Minor spares kit	1	**6.281 378**
Major spares kit	1	**6.285 678**
Industrial standard 1000 ppm K	1	**9.309 425**
Industrial standard 1000 ppm Li	1	**9.309 426**
Industrial standard 3000 ppm Ba	1	**9.309 427**
Industrial standard 1000 ppm Na	1	**9.309 428**
Industrial standard 1000 ppm Ca	1	**9.309 429**
Calibration standard 500 ml (100 mmol/l sodium, 100 mmol/l potassium)	1	**6.206 011**
Calibration Standard 500 ml (140 mmol/l sodium, 5 mmol/l potassium)	1	**6.235 605**
Sodium filter	1	**6.233 141**
Potassium filter	1	**6.252 007**
Atomiser PFP7	1	**6.232 237**
Ignition electrodes	3	**6.253 386**

E & OE.

Flame Photometers FP8000 series

NEW

A.KRÜSS Optronic

Even the lowest concentrations of alkali and alkaline earth elements in aqueous solutions can be determined cost-effectively and user-friendly. Simultaneous measurement of the elements Na, K, Ca and Li in the laboratory and process analysis (others on request). Thanks to proven measuring methods and modern instrument electronics, the flame photometers achieve precise and reproducible measurement results in a matter of seconds with maximum operational reliability. Suitable for individual measurements, fully automatic measuring operation, continuous operation and use as a process instrument.

- Economic, user-friendly and durable solution for use in laboratory and process operation
- Simultaneous measurement of up to four alkaline and alkaline earth elements, depending on model up to 300 measurements per hour
- Maximum operational safety through intelligent security mechanisms
- Simple operation through touch screen and intuitive software
- To use with Popan/Butan (alkaline elements) and Acetylene (alkaline earth elements)
- Interfaces: 2 x USB, 1 x Ethernet, 1 x RS-232 for printer, FP8500 additionally: Upgrade 4 to 20 mA analogue, passive current interface
- Compliance with international norms and standards

Specifications

Measuring ranges:	
Na/K/Li	0.01 ... 4500 ppm
Ca	0.50 ... 4500 ppm
Calibration:	Linear with 2 standards
	Not-linear with 6-8 standards, cubic approximation
Drift:	1 % in 60 min
Reference:	Lithium guideline with 5 mmol/l
	Cäsium guideline on request

Type	Sample volume ml	Description	Resolution mg/l	Accuracy ± mg/l	PK	Cat. No.
FP8400	2.5	manual sample feeding	0.001	0.01	1	**6.311 904**
FP8500	2.5	automatic sample feeding	0.001	0.01	1	**6.311 905**
FP8600	2.5	sample supply via sampler	0.001	0.01	1	**6.311 906**
FP8700	0.25	diluted sample supply, incl. sampler, diluter, mixer	0.010	0.10	1	**6.311 907** 1

1

2 Standards for Flame photometers

Reagecon

Suitable for calibration, control, IQ/OQ and method validation. Compatible with all Flame Photometry Instruments. Available as single element analytical standards (in ppm) or Multi-element clinical standards (in mmol/l). NIST traceable. HDPE bottles of 500 ml.

Type	Measuring range	PK	Cat. No.
Barium	1000 ppm	1	**4.012 213**
Barium	3000 ppm	1	**6.210 154**
Lithium	1 mmol/L	1	**4.012 220**
Lithium	1000 ppm	1	**4.012 214**
Potassium	1000 ppm	1	**6.210 151**
Sodium	1000 ppm	1	**6.210 152**
Calcium	1000 ppm	1	**6.210 153**
Sodium / Potassium	100 / 100 mmol/L	1	**4.012 215**
Sodium / Potassium	120 / 2 mmol/L	1	**4.012 216**
Sodium / Potassium	140 / 5 mmol/L	1	**4.012 217**
Sodium / Potassium	160 / 8 mmol/L	1	**4.012 218**
Sodium / Potassium	160 / 80 mmol/L	1	**4.012 219**
Rinse solution	-	1	**6.286 180**

2

Cells for spectrophotometer

High precision standard cells for routine analysis. Suitable for most spectral photometers, using rectangular cells. Available with cover or with stopper for a liquid-tight seal. Cover and stopper made of PTFE.

Starna Scientific

Glass types
Type G: Optical glass, 334 to 2500 nm
Type SOG: Special optical glass, 320 to 2500 nm
Type Q: Spectrosil® For UV Quartz glass, 190 to 2700 nm

Specifications

Windows parallel to:	< 3 arcmin
Window polish:	60/40 scratch/dig
Window thickness:	1.25 mm
Window flatness to:	< 4 Newton fringes

Standard Rectangular Cells

NEW

Starna Scientific

Type	Volume ml	Path length mm	External dimensions (W x D x H) mm	Internal width mm	Description	PK	Cat. No.	
1/G/10	3.500	10	12.5 x 12.5 x 45	10	with cover	1	**4.678 102**	
1/G/50	17.500	50	12.5 x 52.5 x 45	9.5	with cover	1	**4.678 103**	
1/SOG/10	3.500	10	12.5 x 12.5 x 45	10	with cover	1	**4.678 104**	
1/SOG/40	14.000	40	12.5 x 42.5 x 45	10	with cover	1	**4.678 105**	
1/Q/1	0.400	1	12.5 x 3.5 x 45	10	with cover	1	**4.678 106**	
1/Q/2	0.700	2	12.5 x 4.5 x 45	10	with cover	1	**4.678 107**	
1/Q/5	1.700	5	12.5 x 7.5 x 45	10	with cover	1	**4.678 108**	
1/Q/10	3.500	10	12.5 x 12.5 x 45	10	with cover	1	**4.678 109**	
1/Q/20	7.000	20	12.5 x 22.5 x 45	10	with cover	1	**4.678 110**	1
1/Q/40	14.000	40	12.5 x 42.5 x 45	10	with cover	1	**4.678 111**	
1/Q/50	17.500	50	12.5 x 52.5 x 45	9.5	with cover	1	**4.678 112**	
1/Q/100	35.000	100	12.5 x 102.5 x 45	9.5	with cover	1	**4.678 113**	
9/Q/10	1.400	10	12.5 x 12.5 x 45	4	with cover, semi micro cell	1	**4.678 115**	2
21/Q/1	0.400	1	12.5 x 3.5 x 55	10	with stopper	1	**4.678 116**	
21/Q/2	0.700	2	12.5 x 4.5 x 55	10	with stopper	1	**4.678 117**	
21/Q/5	1.700	5	12.5 x 7.5 x 48	10	with stopper	1	**4.678 118**	
21/Q/10	3.500	10	12.5 x 12.5 x 48	10	with stopper	1	**4.678 119**	
21/Q/20	7.000	20	12.5 x 22.5 x 48	10	with stopper	1	**4.678 120**	
21/Q/40	14.000	40	12.5 x 42.5 x 48	10	with stopper	1	**4.678 121**	
21/Q/50	17.500	50	12.5 x 52.5 x 48	9.5	with stopper	1	**4.678 122**	
21/Q/100	35.000	100	12.5 x 102.5 x 48	9.5	with stopper	1	**4.678 123**	
21/MS/Q/10	3.5	10	12.5 x 12.5 x 48	10	with stopper, stirring cell	1	**4.678 124**	3

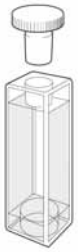
1

4.678 110

2

4.678 115

3



4.678 124

Standard rectangular fluorometer cells

NEW

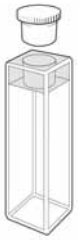
Starna Scientific

Type	Volume ml	Path length mm	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Description	PK	Cat. No.	
3/Q/10	3.500	10	12.5 x 12.5 x 45	10	with cover	1	**4.678 114**	4
23/Q/10	3.500	10	12.5 x 12.5 x 48	10	with stopper	1	**4.678 125**	5

4

4.678 114

5



4.678 125

E & OE.

Calibration - Qualification of spectrophotometers with the certified reference materials from Hellma Analytics

To maintain constant good measurement results, a regular review of the accuracy of the spectrophotometer is required. With the use of certified reference materials from Hellma Analytics, you make sure that your equipment qualifications meet the requirements of the pharmacopoeias and fulfill your internal quality requirements, at the same time you reach the international comparability of your measurement results. The certified reference materials (calibration standards) of the DIN EN ISO 17025 accredited Hellma Analytics calibration laboratory are traceable to the primary standards of NIST (National Institute of Standards and Technology) and meet the requirements of the major pharmacopoeias (e.g. EP, DAB, USP).

Your benefits:
- High quality of the measurement results
- International comparability of measurement results
- Meeting the requirements of the major pharmacopoeias (EP, DAB, USP)
- Results traceable to NIST primary standards
- 30 years warranty on the reference materials

Scope of delivery:
- Certified reference materials (Calibration Standards) in quality storage box
- DAkkS Calibration Certificate (DIN 17025)
- Handling guidelines

1

9.190 980

DAkkS Deutsche Akkreditierungsstelle D-K-18752-01-00

Certified reference materials for qualifying spectrophotometer as a complete set

Glass Filters 666-S000: For testing spectrophotometers. Photometric accuracy and wavelength accuracy in the visible spectral region. *Hellma Analytics*

Liquid Filters 667.033-UV: For testing spectrophotometers according to European Pharmacopoeia, wavelength accuracy, photometric accuracy, stray light behaviour, resolution.

Type	Capacity	Material	Wave-length nm	PK	Cat. No.
666-S000	666-F1	Holmium Oxide Glass Filter	279, 361, 453, 536, 638	1	**9.190 973**
	666-F2	Neutral Density Glass Filter NG 11	440; 465; 546,1; 590; 635		
	666-F3	Neutral Density Glass Filter NG 5	440; 465; 546,1; 590; 635		
	666-F4	Neutral Density Glass Filter NG 4	440; 465; 546,1; 590; 635		
	666-F0	Empty Filter Mount			
667.003-UV	667.100-UV	Potassium Chloride + blank	198, 200 (certified)	1	**9.190 980** 1
	667.200-UV	Toluene in Hexane + blank	266, 269		
	667.305-UV	Potassium Dichromate in $HClO_4$ + blank	235, 257, 313, 350, 430		
	667-UV5	Holmium Perchlorate in Perchloric Acid	241,15; 287,15; 361,5; 536,3		

Filters also available individually.

Check for spectral resolution

Hellma Analytics

Type	Description	Wave-length nm	PK	Cat. No.
667.200-UV	Calibration set according to European Pharmacopoeia, contains filter UV6, UV9		1	**6.240 535**
667-UV6	Liquid filter UV6, Toluene in n-hexane	266, 269	1	**9.190 983**
667-UV9	Reference filter UV9, n-hexane	-	1	**6.231 555**

Check the wavelength accuracy

Hellma Analytics

Type	Description	Wave-length nm	PK	Cat. No.
667-UV5	Liquid filter UV5, Holmium oxide in Perchloric acid	240 - 650	1	**6.227 666** 2
667-UV25EPUSP	Liquid filter UV25, Didymium in Perchloric acid	329 - 864	1	**4.670 729** 3
667-UV35	Liquid filter UV35, Rare Earth in Perchloric acid	201 - 252	1	**4.670 730** 4
667-UV45	Liquid filter UV45, Holmium oxide and Didymium in Perchloric Acid	240 - 870	1	**6.286 793** 5
666-F1	Glass filter F1, Holmium oxide	279 - 638	1	**6.201 067** 6
666-F7A	Glass filter F7, Didymium	270 - 340	1	**7.612 486** 7
666-F7W	Glass filter F7, Didymium	329 - 875	1	**6.286 794**

2

6.227 666

3

4.670 729

4

4.670 730

5

6.286 793

6

6.201 067

7

7.612 486

Check for photometric accuracy

Hellma Analytics

Type	Description	Wave-length nm	PK	Cat. No.	
667-UV305	Calibration set acc. to European Pharmacopoeia (UV60, UV600, UV14)		1	**7.626 372**	1
667-UV350	Liquid filter calibration-Set, Niacin (UV506, UV512, UV518, UV524, UV599)	213 - 261	1	**4.670 731**	2
667-UV60	Liquid filter UV60, Potassium dichromate 60 mg/l	235 - 350	1	**6.240 039**	
667-UV600	Liquid filter UV600, Potassium dichromate 600 mg/l	430	1	**9.190 984**	
667-UV14	Reference filter UV14, Perchloric acid	-	1	**6.240 040**	
666-F2	Neutral density glass filter F2, 0.25 absorbance	440 - 635	1	**6.801 867**	3
666-F3	Neutral density glass filter F3, 0.5 absorbance	440 - 635	1	**6.801 332**	4
666-F4	Neutral density glass filter F4, 1.0 absorbance	440 - 635	1	**6.801 868**	5
666-F7W	Glass filter F7, Didymium	329 - 875	1	**6.286 795**	

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7.626 372

2

4.670 731

3

6.801 867

4

6.801 332

5

6.801 868

Cells for Absorption Measurement, Vis-range

Hellma Analytics

Wavelength Range:
260nm - 2500 nm
320 nm - 2500 nm
360 nm - 2500 nm

Optical material:
HOQ 310H **(UV)**
Special optical glass **(OS)**
Optical glass **(OG)**

Type	Description	Capacity µl	External dimensions (W x D x H) mm	Internal width mm	Path length mm	optical material	PK	Cat. No.
macro		3500	12,5 x 12,5 x 45	9,5	10 (± 0,05)	UV	1	**9.144 301**
macro	PTFE lid	3500	12,5 x 12,5 x 45	9,5	10	OG	1	**9.144 300**
macro		7000	12,5 x 22,5 x 45	9,5	20	OG	1	**9.144 302**
macro		14000	12,5 x 42,5 x 45	9,5	40	OG	1	**9.144 340**
macro		17500	12,5 x 52,5 x 45	9,5	50	OG	1	**9.144 350**
semi-micro		1400	12,5 x 12,5 x 45	4	10 (± 0,05)	UV	1	**9.144 361**
semi-micro	PTFE lid	1400	12,5 x 12,5 x 45	4	10	OS	1	**9.144 410**
semi-micro	PTFE lid	7000	12,5 x 52,5 x 45	4	50	OS	1	**9.144 450**
semi-micro		1400	12,5 x 12,5 x 45	4	10	OG	1	**9.144 360**
micro	PTFE lid	700	12,5 x 12,5 x 45	2	10	OS	1	**9.144 750**

6

6 Micro Volume Analysis TrayCell

Hellma Analytics

Fibre-Optic Micro Measuring Cell. Accessory for standard spectrophotometer for droplet analysis.
Sample volume 0.7 µl to 10 µl.

Typical applications are:
- nucleic acid analysis.
- determination of the incorporation frequency of fluorescent dye labels (FOI).
- protein analysis (A280, BCA, Lowry etc.).
- all UV/Vis analysis utilising wavelength range 190 nm to 1100 nm.
- material: Quartz glass High Performance.

Please state the required cell centre height (8.5 mm, 15 mm or 20 mm) when placing your order!
TrayCell is supplied as standard with caps for both 0.2 mm and 1 mm light path.
Additional light path of 0.1 mm and 2 mm are available.

Capacity µl	Height mm	Path length mm	Centre height mm	PK	Cat. No.
0.7 to 10	68.5 / 75 / 80	0.2 / 1	8.5 / 15 / 20	1	**6.224 913**
0.7 to 10	53 / 59.5 / 64.5	0.2 / 1	8.5 / 15 / 20	1	**6.230 433**

E & OE.

Cells for Absorption Measurement, UV-range

Wavelength Range: 200 nm - 2500 nm.
Optical material: Quartz glass High Performance

Hellma Analytics

1

9.144 372

2

9.144 756

Type	Description	Capacity µl	External dimensions (W x D x H) mm	internal width (mm) / aperture (mm x mm/Ø)	Centre height mm	Path length mm	PK	Cat. No.
macro	Screw cap **	3500	12.5 x 12.5 x 56	9.5		10	1	**6.801 219**
semi-micro	PTFE lid	1400	12.5 x 12.5 x 45	4		10	1	**9.144 460**
semi-micro	PTFE lid	7000	12.5 x 52.5 x 45	4		50	1	**9.144 465**
semi-micro	PTFE lid *	1400	12.5 x 12.5 x 45	4		10	1	**9.144 490**
semi-micro	PTFE lid	1000	12.5 x 12,5 x 45	4	15.2	10	1	**6.250 017**
semi-micro	PTFE stopper	1400	12.5 x 12.5 x 46	4		10	1	**9.144 730**
semi-micro	PTFE stopper *	1400	12.5 x 12.5 x 46	4		10	1	**9.144 372** 1
micro	PTFE lid	700	12.5 x 12.5 x 45	2		10	1	**9.144 751**
micro	PTFE lid *	700	12.5 x 12.5 x 45	2		10	1	**9.144 756** 2
micro	PTFE lid	500	12.5 x 12.5 x 45	2	15.2	10	1	**6.084 722**
micro	PTFE lid *	500	12.5 x 12.5 x 45	2	15.2	10	1	**6.076 641**
micro	PTFE lid	400	12.5 x 12.5 x 40	2		10	1	**9.144 758**
micro	PTFE lid *	400	12.5 x 12.5 x 40	2		10	1	**9.144 385**

[M] = Measuring volume
*black side walls and base
**with silicone rubber seal and with ISO thread GL 14

Ultra micro cells for absorption measurement, UV-range, quartz glass High Performance

Quartz glass High Performance 200 - 2500 nm.
Type A: with PE stopper
Type B: open pipette tips

Hellma Analytics

3

9.190 965

4

9.144 156

Type	Path length mm	Centre height mm	External dimensions (W x D x H) mm	Aperture mm	Capacity µl	PK	Cat. No.
A	10	15	12,5 x 12,5 x 45	8x2	160	1	**9.190 969**
A	10	8,5	12,5 x 12,5 x 45	8x2	160	1	**9.190 966**
A	10	15	12,5 x 12,5 x 45	5x2	100	1	**9.190 968**
A	10	8,5	12,5 x 12,5 x 45	5x2	100	1	**9.190 965** 3
A	10	15	12,5 x 12,5 x 45	2,5x2	50	1	**9.190 967**
A	10	8,5	12,5 x 12,5 x 45	2,5x2	50	1	**9.190 964**
B	10	15	12,5 x 12,5 x 40	Ø 0,8	5	1	**9.144 156** 4
B	10	8,5	12,5 x 12,5 x 40	Ø 0,8	5	1	**9.144 157**

We can supply this manufacturer's whole product range !

Lab Logistics Group

Hellma® Analytics
High Precision in Spectro-Optics

1

9.144 210

2

9.144 610

Macro cells for absorption measurement, UV-range, quartz glass High Performance

Quartz glass High Performance 200 - 2500 nm. Inside width 9.5 mm. Base thickness 1.5 mm. *Hellma Analytics*

Type A: with PTFE lid
Type B: with small glass lid
Type D: with PTFE stopper/from 40 mm with 2 PTFE stoppers

Type	Path length mm	External dimensions (W x D x H) mm	Capacity µl	PK	Cat. No.
A	5	12,5 x 7,5 x 45	1750	1	**9.144 205**
A	10	12,5 x 12,5 x 45	3500	1	**9.144 210** 1
A	20	12,5 x 22,5 x 45	7000	1	**9.144 220**
A	40	12,5 x 42,5 x 45	14000	1	**9.144 240**
A	50	12,5 x 52,5 x 45	17500	1	**9.144 250**
B	1	12,5 x 3,5 x 45	350	1	**9.144 201**
B	2	12,5 x 4,5 x 45	700	1	**9.144 202**
C	100	12,5 x 102,5 x 45	35000	1	**6.088 125**
D	1	12,5 x 3,5 x 52	350	1	**9.144 601**
D	2	12,5 x 4,5 x 52	700	1	**9.144 602**
D	5	12,5 x 7,5 x 46	1750	1	**9.144 605**
D	10	12,5 x 12,5 x 46	3500	1	**9.144 610** 2
D	20	12,5 x 22,5 x 45	7000	1	**9.144 620**
D	40	12,5 x 42,5 x 46	14000	1	**9.144 640**

3

9.144 101

Macro cells for absorption measurement, VIS-range, special optical glass

Special optical glass 360 - 2500 nm. Inside width 9.5 mm. Base thickness 1.5 mm. *Hellma Analytics*

Type A: with PTFE-Falzdeckel
Type B: with small glass lid
Type C: with regular glass lid
Type D: with PTFE stopper/from 40 mm with 2 PTFE stoppers

Type	Path length mm	External dimensions (W x D x H) mm	Capacity µl	PK	Cat. No.
A	5	45 x 12,5 x 7,5	1750	1	**9.144 105**
A	10	45 x 12,5 x 12,5	3500	1	**9.144 110**
A	20	45 x 12,5 x 22,5	7000	1	**9.144 120**
A	40	45 x 12,5 x 42,5	14000	1	**9.144 140**
A	50	45 x 12,5 x 52,5	17500	1	**9.144 150**
B	1	45 x 12,5 x 3,5	350	1	**9.144 101** 3
B	2	45 x 12,5 x 4,5	700	1	**9.144 102**
D	10	46 x 12,5 x 12,5	3500	1	**9.144 510**

4

6.052 763

Macro cells for absorption measurement, NIR-range, quartz glass Extended Range

Quartz glass Extended Range, Wavelength range: 200 - 3500 nm. Inside width 9.5 mm. Base thickness 1.5 mm. *Hellma Analytics*

Type A: with PTFE lid
Type B: with small glass lid
Type D: with PTFE stopper/from 40 mm with 2 PTFE stoppers

Type	Path length mm	External dimensions (W x D x H) mm	Capacity µl	PK	Cat. No.
A	5	45 x 12,5 x 7,5	1750	1	**6.053 055**
A	10	45 x 12,5 x 12,5	3500	1	**6.086 375**
A	50	45 x 12,5 x 52,5	17500	1	**6.078 779**
B	1	45 x 12,5 x 3,5	350	1	**6.302 993**
B	2	45 x 12,5 x 4,5	700	1	**6.901 645**
D	1	52 x 12,5 x 3,5	350	1	**6.800 848**
D	5	46 x 12,5 x 7,5	1750	1	**6.072 791**
D	10	46 x 12,5 x 12,5	3500	1	**6.052 763** 4

E & OE.

Cells for Fluorescence Measurement, Vis-range

Wavelength Range: 320 nm - 2500 nm
Optical material: Special optical glass

Hellma Analytics

1

9.144 760

2

9.144 770

Type	Description	Capacity µl	External dimensions (W x D x H) mm	Internal width mm	Path length mm	PK	Cat. No.
macro	PTFE-lid	3500	12.5 x 12.5 x 45	10	10 x 10	1	**9.144 760** 1
macro	PTFE-stopper	3500	12.5 x 12.5 x 46	10	10 x 10	1	**9.144 770** 2

Cells for Fluorescence Measurement, UV-range

Wavelength Range: 200 nm - 2500 nm
Optical material: Quartz glass High Performance

Hellma Analytics

Type	Description	External dimensions (W x D x H) mm	internal width (mm) / aperture (mm x mm/Ø)	Path length mm	Centre height mm	PK	Cat. No.
macro	PTFE lid, 4 window	12.5 x 12.5 x 45	10	10 x 10		1	**9.144 761**
macro	PTFE stopper, 4 window	12.5 x 12.5 x 46	10	10 x 10		1	**9.144 771**
semi-micro	PTFE stopper **	12.5 x 12.5 x 49.5	4	10 x 4		1	**6.080 511** 3
micro	PTFE lid	12.5 x 12.5 x 45	2	10 x 2	20.0	1	**6.081 483** 4
micro	PTFE lid	12.5 x 12.5 x 45	2	10 x 2		1	**9.144 801**
ultramicro	PE stopper, 3 window	12.5 x 12.5 x 45	5 x 3	3 x 3	15.0	1	**9.144 391** 5
ultramicro	PE stopper, 3 window	12.5 x 12.5 x 45	5 x 3	3 x 3	8.5	1	**9.144 390**
ultramicro	PE stopper, 3 window	12.5 x 12.5 x 45	5 x 2	10 x 2	15.0	1	**6.051 579**
ultramicro	PE stopper, 3 window	12.5 x 12.5 x 45	5 x 2	10 x 2	8.5	1	**6.510 380**

**for magnetic stirrers

3

6.080 511

4

6.081 483

5

9.144 391

Cells for light scattering measurements, UV-range

Wavelength: 200 nm - 2500 nm
Optical material: Quartz glass High Performance

Hellma Analytics

6

6.302 852

7

6.255 204

Description	Capacity µl	External dimensions (H x Ø) mm	Internal dimensions (H x Ø) mm	PK	Cat. No.
PTFE-stopper	2800	75 x 10	74 x 8	1	**6.302 852** 6
PTFE-stopper, outer cylinder fire-polished	2800	75 x 10	74 x 8	1	**6.073 106**
PTFE-stopper	14000	75 x 20	74 x 18	1	**6.255 204** 7

Cells for Absorption Measurement, Flow-Through Measurement, UV-range

Wavelength Range: 200 - 2500 nm.
Optical material: Quartz glass High Performance

Hellma Analytics

Type	Path length mm	Capacity µl	Description	External dimensions (W x D x H) mm	Internal width mm	Centre height mm	PK	Cat. No.
semi-micro	10	450	Supply and outlet tubes	12,5 x 12,5 x 45	11 x 4	15.0	1	**6.051 845**
semi-micro	50	2250	Supply and outlet tubes	12,5 x 52,5 x 45	11 x 4	15.0	1	**6.080 156** 1
semi-micro	50	2250	Supply and outlet tubes	12,5 x 52,5 x 38,5	11 x 4	8.5	1	**6.242 811**
semi-micro	5	195	2 screw terminals *	12,5 x 12,5 x 35	11 x 3,5	15.0	1	**6.059 697**
semi-micro	5	195	2 screw terminals *	12,5 x 12,5 x 35	11 x 3,5	8.5	1	**6.300 696**
semi-micro	10	390	2 screw terminals *	12,5 x 12,5 x 35	11 x 3,5	15.0	1	**9.144 667** 2
semi-micro	10	390	2 screw terminals *	12,5 x 12,5 x 35	11 x 3,5	8.5	1	**9.144 666**
micro	0,1	6	2 screw terminals *	12,5 x 12,5 x 35	17,5 x 3,5		1	**9.144 660**
micro	0,2	12	2 screw terminals *	12,5 x 12,5 x 35	17,5 x 3,5		1	**6.206 587**
micro	0,5	31	2 screw terminals *	12,5 x 12,5 x 35	17,5 x 3,5		1	**9.144 662**
micro	1	62	2 screw terminals *	12,5 x 12,5 x 35	17,5 x 3,5		1	**9.144 664** 3
micro	2	124	2 screw terminals *	12,5 x 12,5 x 35	17,5 x 3,5		1	**9.144 663**

* M 6 x 1 and FEP tubes (outside diameter 1.9mm, inner diameter 1.1mm, length 500mm)

1

6.080 156

2

9.144 667

3

9.144 664

4

6.266 794

Flow-through cells with two optical paths lengths, Absorption and Fluorescence Measurement

Wavelength Range: 200 nm - 2500 nm
Optical material: Quartz glass High Performance

Hellma Analytics

Type	Path length mm	Capacity µl	External dimensions (W x D x H) mm	internal width (mm) / aperture (mm x mm/Ø)	Centre height mm	PK	Cat. No.
semi-micro*	5 x 10	550	35 x 12.5 x 12.5	11 x 6/11 x 5	15.0	1	**6.267 923**
semi-micro*	5 x 10	550	35 x 12.5 x 12.5	11 x 6/11 x 5	8.5	1	**6.266 794** 4
semi-micro	2.5 x 5	140	35 x 12.5 x 12.5	11 x 4/11 x 2.5	15.0	1	**4.658 278**
semi-micro	2.5 x 5	140	35 x 12.5 x 12.5	11 x 4/11 x 2.5	8.5	1	**6.286 789**
semi-micro	1.5 x 3	50	35 x 12.5 x 12.5	11 x 2.5 /11 x 1.5	15.0	1	**6.280 788**
semi-micro	1.5 x 3	50	35 x 12.5 x 12.5	11 x 2.5 /11 x 1.5	8.5	1	**6.286 790**
semi-micro	1 x 10	110	35 x 12.5 x 12.5	11 x 6/11 x 1	15.0	1	**6.280 645**
semi-micro	1 x 10	110	35 x 12.5 x 12.5	11 x 6/11 x 1	8.5	1	**6.286 791**
semi-micro*	2 x 10	220	35 x 12.5 x 12.5	11 x 6/11 x 2	15.0	1	**4.658 277**
semi-micro	2 x 10	220	35 x 12.5 x 12.5	11 x 6/11 x 2	8.5	1	**6.286 792**

* For fluorescence measurement

1 LLG-Disposable plastic cells, PS

1

The shape and narrow wall thickness of the cuvettes enable an excellent heat transfer resulting in constant sample temperatures during photometric measurements.

- Cavity sorted
- Glass clear polystyrene (PS)
- Applicable wavelength range 340 nm to 900 nm
- Very low variation of extinction values
- Excellent optical transmission range
- Path length 10mm
- Overall dimensions 12.5 mm x 12.5 mm x 45 mm
- Styrofoam racks: 100 cuvettes in a styrofoam box with cover

Description	Capacity ml	Path length mm	Operating range nm	Material	PK	Cat. No.
Macro	4.0	10	340 to 900	PS	100	**9.406 011**
Semi-micro	1.6	10	340 to 900	PS	100	**9.406 012**

2 Disposable cuvettes

2

Kartell

Disposable cuvettes for spectroscopy, in optical-quality PS and UV grade PMMA with optical windows for optimum transmittance when using wavelengths from 340nm to 800 nm (PS) and from 280 nm to 800 nm (PMMA). Moulding and quality control determine the reproducibility of cuvettes. Kartell cuvettes are strictly controlled and varations should be within the range ±1% absorption. This is the vital when batch analysis is being undertaken. Dust proof packaging: 100 pcs in expanded polystrene box with lid, 5 boxes in inner carton and 12 inner cartons (60 boxes) per case.

Description	Capacity ml	Path length mm	Material	PK	Cat. No.
Standard cuvettes	4.5	10	PS	100	**9.406 431**
Semi-micro cuvettes, low form	1.5	10	PS	100	**9.406 432**
Semi-micro cuvettes, high form	2.5	10	PS	100	**9.406 433**
Standard cuvettes, 4 clear faces	4.5	10	PS	100	**9.406 434**
Standard cuvettes	4.5	10	PMMA	100	**9.406 435**
Semi-micro cuvettes, high form	2.5	10	PMMA	100	**9.406 436**
Semi-micro cuvettes, low form	1.5	10	PMMA	100	**9.406 437**
Standard cuvettes, 4 clear faces	4.5	10	PMMA	100	**9.406 438**

3 Accessories for standard and semi-micro cuvettes

3

Kartell

Description	Material	Length mm	Diam.	PK	Cat. No.
Disposable stirrer	PS	90	3	100	**9.406 439**
Caps for cuvettes	PE-LD			1000	**9.406 440**
Cuvette holder for 12 cuvettes	PE			1	**9.406 441**

VIS cuvettes Eppendorf®, PMMA

4

6.265 212

5

6.265 213

Eppendorf AG

The Eppendorf® Vis Cuvettes are disposable cuvettes made of clear plastic with a light transmission of 300 nm to 900 nm. They are the perfect tool for applications outside of the UV range, for example, colorimetric protein assays (Bradford, Lowry, etc.), determining of the optical density of bacterial cultures (OD600 methods), kinetic and fluorescence measurements.
Based on the volume you would like to measure, you can select semi-micro or macro cuvette.

Description	Capacity µl	Path length mm	Operating range nm	Material	PK	Cat. No.
Macro	4500	10	300 -900	PMMA	1000	**6.265 212** 4
Semi-micro	3000	10	300 -900	PMMA	1000	**6.265 213** 5

1 Macro and semi micro cuvettes

Sorted by mould cavity number. PMMA or PS. *BRAND*

Quality characteristics:
- Minimal extinction value variation.
- Optically perfect transmission range
- Recessed window, to protect against scratches
- Arrow head marking shows the direction of transmission.

Advantages to user:
- Ideal for kinetics measurements
- 1000 cells from the same cavity in each pack
- Practical packaging: clear, re-closable.

Polymethylmethacrylate (PMMA) cuvettes
Typical operating range: from 300 nm to 900 nm.
Standard deviation at 320 nm ±0.004 extinction units.

Polystyrene (PS) cuvettes
Typical operative range: from 340 nm to 900 nm.
Standard deviation at 360 nm ≤ ±0.005 extinction units.

Macro cell with 4 optical windows, PS/UV-transparent
Particularly suitable for fluorescence spectroscopy. The UV version can be used from a wavelength of 230 nm and shows minimal autofluorescence. Standard deviation: Cuvettes of Polystyrene (PS) at 360 nm ≤ ±0.005 extinction units, cuvettes UV-transparent at 240 nm ≤ ±0.007 extinction units and at 300 nm ≤ ±0.005 extinction units.

Dimensions: 12.5 mm x 12.5 mm x 45 mm
Window: Macro cell 10 mm x 35 mm
Semi micro cell 4.5 mm x 23 mm

Description	Volume ml	Path length mm	Operating range nm	Material	PK	Cat. No.
Macro	2.5 to 4.5	10	300 to 900	PMMA	100	**9.406 111**
Semi-micro	1.5 to 3.0	10	300 to 900	PMMA	100	**9.406 115**
Macro	2.5 to 4.5	10	340 to 900	PS	100	**9.406 110**
Semi-micro	1.5 to 3.0	10	340 to 900	PS	100	**9.406 114**
Macro, 4 optical windows	2.5 to 4.5	10	340 to 900	PS	100	**6.280 982**
Macro, 4 optical windows	2.5 to 4.5	10	340 to 900	PS	500	**6.280 981**
Macro, 4 optical windows	2.5 to 4.5	10	230 to 900	UV-transparent	100	**6.280 680**
Macro, 4 optical windows	2.5 to 4.5	10	230 to 900	UV-transparent	500	**6.280 980**

2 Macro and semi micro cuvettes, plastic

NEW

For photometric measurements even in the UV range. *Ratiolab*

- Applicable wavelength range 220 to 900 nm
- Low variation of extinction values
- Good optical transmission range
- Sorted by mould cavity number

Scope of supply: 100 netidentical cuvettes in styrofoam box with a resealable cover

Description	Nominal capacity ml	Operating range nm	Path length mm	Dimensions (W x D x H) mm	PK	Cat. No.
Macro	4.0	220 ... 900	10	12,5 x 12,5 x 45	100	**6.225 579**
Semi-micro	1.6	220 ... 900	10	12,5 x 12,5 x 45	100	**6.243 404**

E & OE.

1 Plastic disposable UV-Cuvettes for the UV/VIS range

BRAND

UV-transparent plastic Brand cuvettes replace fragile glass or quartz cuvettes in many applications that were previously beyond the range of plastic cuvettes.
Designed for single use, they eliminate time-consuming washing, and the cross-contamination risk associated with washing and re-using cuvettes. Their very high chemical resistance allows use with most polar solvents, acids and alkalis (e.g. Acetone, Butanone, DMF, hydrochloric acid).
The UV-uvette micro has a working range from 230 nm - sample volumes as small as 70 µl are sufficient.
The UV-Cuvette is also available in macro and semi-macro sizes for applications from 230 nm to 900 nm.

- Specially designed for photometric determination of proteins, ssDNA, dsDNA, TNA and oligonucleotides in the UV range.
- Ideally suited for measurements at 260 nm, 280 nm and in the visible range.
- Two different centre heights (8.5 mm and 15 mm) allow use in most commercial spectrophotometers without adapters (for more information please visit the Brand website, www.brand.de).
- Round caps provide a tight seal and allow storage of samples at -20 °C.
- Coloured caps are available for easy sample identification.
- Grouped by mould cavity number to minimize extinction value variation.

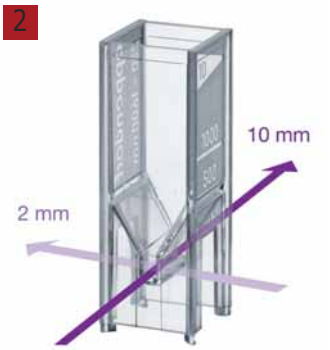
The UV cuvette is also available as a macro and semi-microscope cuvette for analyzes from 230 to 900 nm.

Made of plastic for the UV/VIS range. For analyzes from 230 to 900 nm
- Compatible with most polar solvents, as well as acids and alkalis (eg acetone, butanone, DMF, concentrated HCL, etc.)
- Ideal for the determination of proteins, DNA, RNA
- number-sorted to reduce extinction deviations
- Vertified windows to protect against scratches

Description	Capacity	Path length	Operating range	PK	Cat. No.
	µl	mm	nm		
UV micro cuvette (centre height 8.5 mm)	70 - 850	10.0	230 - 900	100	**9.406 120**
UV micro cuvette (centre height 8.5 mm)	70 - 850	10.0	230 - 900	500	**9.406 121**
UV micro cuvette (centre height 15 mm)	70 - 550	10.0	230 - 900	100	**9.406 122**
UV micro cuvette (centre height 15 mm)	70 - 550	10.0	230 - 900	500	**9.406 123**
Cap for UV micro cuvette, blue				100	**9.406 124**
Cap for UV micro cuvette, yellow				100	**9.406 125**
Cap for UV micro cuvette, green				100	**9.406 126**
Cap for UV micro cuvette, orange				100	**9.406 127**
UV macro cuvette	2.5 ml - 4.5 ml	10.0	230 - 900	100	**9.406 119**
UV semi-micro cuvette	1.5 - 3.0 ml	10.0	230 - 900	100	**9.406 118**

2 3 UV cuvette UVette®

Eppendorf AG



The plastic material of the UVettes® provides a transparency range of 220 nm to 1600 nm. It is possible to carry out measurements in the UV range as well as the entire VIS range.

- Suitable for measuring small volumes, min. 50 µl
- Individually blister-packed for sterile work
- DNA-/RNase- and protein-free
- Choice of two optical path lengths: 2 mm and 10 mm
- UV- and VIS-transparent between 220 nm and 1600 nm
- Volume markings at 500 µl and 1000 µl
- Total transparent material with outstanding surface properties
- Optimal filling guaranteed by tapered cuvette base
- Recessed optical window prevents scratches
- Self-standing design
- Marking possible on frosted gripping surface
- Optimal use in BioPhotometer and in most common spectrophotometers, using adapters.

Description	PK	Cat. No.
UVettes® , 80 x individually wrapped, disposable cells for direct use in BioPhotometer, path length 2 and 10 mm	80	**9.409 392**
UVette® routine pack, Eppendorf Quality, path length 2 and 10 mm	200	**9.409 398**
Starter kit, 80 x UVettes® + 1 universal adapter for photometers/spectrophotometers with beam centre height of 15 mm, convertible	80	**9.409 397**

1

1 HELLMANEX® III liquid

Hellma Analytics

Cleaning:
HELLMANEX® III is an alkaline liquid concentrate used for the highly effective cleaning of glass or silica cells and other sensitive optical components. Laboratory equipment made of glass, quartz, sapphire and porcelain can also be cleaned using the solution.

Characteristics:
Hellmanex® III significantly reduces the surface tension of water. The removal of dirt particles is also assured by the good wetting action of a Hellmanex® III aqueous solution, whilst its high emulsifying and dispersing capabilities prevent the re-deposition of the loosened particles. Special surface-active substances facilitate the residue-free rinsing of the optical components once they have been cleaned.

Cleaning and Dilution:
The optimal dilution depends on several factors, such as the hardness of the water, the degree and type of contamination, the temperature, etc. The use of demineralised water improves the cleaning characteristics.

Available in 1.3kg PE-bottle.

The following treatments have been proven at a **concentration (vol%) 0.5 to 2** in practice.

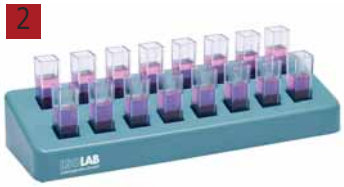
Attention

H phrases: H290|H315|H319|H335

Temperature°C	Time minutes
20-25	120-180
30-35	30-40
50-60 (quartz only)	10-15
70-80 (quartz only)	< 5

Type	Capacity Litres	PK	Cat. No.
HELLMANEX® III	1	1	**9.190 985**

2



2 Cuvette rack, PP

ISOLAB

A 121 °C

For safe handling and holding of 16 spectrophotometer cuvettes with 10 mm width.
Alphanumerical index on cuvette rows enables easy identification of tube positions.
2 tier body form offers clear visibility option from horizontal direction. Autoclavable (121 °C).

Length mm	Width mm	Height mm	PK	Cat. No.
210	70	35	1	**6.286 844**

3

3 Cuvette rack, PP

BRAND

A 121 °C

Grey. 16 numbered positions.
Autoclavable (121°C).

Width mm	Length mm	Height mm	PK	Cat. No.
70	210	38	1	**9.145 020**

4

4 Cuvette rack with attached lid, PP

ISOLAB

For safe handling and holding up to 12 cuvettes with a 10 mm light path.
These racks consist of hinged lids with secure clasps and removable inserts for easy cleaning.
The height of the lid is designed to accommodate all spectrophotometer cells - even those with covers or stoppers.

Description	PK	Cat. No.
Cuvette rack with attached lid	1	**6.267 353**

E & OE.