



PRECISE BALANCES



PRECISION WEIGHTS



ANTIVIBRATION BALANCE TABLE



MICROSCOPES



LIGHT SOURCE



ABBE REFRACTOMETERS



POLARIMETER



MELTING POINT APPARATUS



REFRACTOMETERS

Precise balances

Balance accessories and precision weights

Stereomicroscopes

Microscopes

Microcameras

Refractometers

Polarimeter

Melting point apparatus

page 262

pages 263 to 264

pages 265 to 266

pages 267 to 274

page 274

pages 275 to 277

page 277

page 278



Precise analytical balance "FA-2204B"

COMECTA

FEATURES

- Digital 7 segment screen.
- Time to stability: 8 seconds.
- Adjustable time and sensitivity control.
- ON/OFF automatic zero adjustment.
- Automatic internal 200g calibration.
- Tare range by subtraction up to the maximum capacity.
- Piece counting function.
- Density measurement in the base of the unit.
- Units of measurement in g, ct, and oz.
- Level adjustment (bubble).
- Data interface: RS-232 for connection to a printer.
- Operable ambient temperature 5 to 40 °C
- Voltage: 220 VAC-50-60Hz.
- Supplied complete with cover.



MODELS	Part No.	Maximum weight capacity g	Precision ±g	Linearity ±g	Height / Width / Depth (exterior) cm	Height / Width / Depth (Draft shield) cm	Ø plate cm	Weight Kg
FA-2204B	5830039	200	0.0001	0.0002	35 21 34	24 19 17.5	8	8.5



Electronic Balance "Laborcom"

COMECTA

COMMON FEATURES

- Easy to read seven segments display.
- Stabilization time: 3 seconds.
- ON/OFF. Automatic Zero adjustment
- External automatic calibration.
- Tare range by subtraction up to maximum capacity.
- Piece counting function. Overload indicator.
- Operating temperature: from 5 to 35 °C.
- Voltage: 220 V ±10 V / 50 Hz.

MODELS	Part No.	Maximum weight capacity g	Precision ±g	Height / Width / Depth (exterior) cm	Ø plate cm	Weight Kg
LABORCOM 110-L	5830025	110	0.01	7 17.5 24	12.5	1.6
LABORCOM 210-L	5830026	210	0.02	7 17.5 24	12.5	1.6
LABORCOM 600-L	5830031	600	0.1	7 17.5 24	12.5	1.6
LABORCOM 1100-L	5830032	1100	0.1	7 17.5 24	12.5	1.6
LABORCOM 2100-L	5830033	2100	0.1	7 17.5 24	12.5	1.6
LABORCOM 11000-L	5830027	11000	1	7 17.5 24	16.5 x 16.5	1.8



Shaking monitor for blood collection "HED02"

FOR BLOOD COLLECTION PROCESSES IN BAGS



FEATURES

- HED02 is a digital blood collection monitor, created to control and monitoring blood collection processes. It has been designed to perform simple, precise and accurate operations.
- It is composed of:
 - Easily removable tray.
 - Wired or wireless interface networking.
 - Automatic clamp closing at the end of the donation.
 - Automatic tare calculation.
 - Real time monitoring of the donation showed on the digital display.
 - Stand alone mode (operating with rechargeable battery). 8 hours life.
 - Sensor to detect the tube presence.

MODEL

Part No.	Max weight Capacity g	Precision g	Resolution g	Height / Width / Depth (external) cm	Power W	Weight Kg
5010000	999	± 3	1	19 32 32	60	5

It is supplied with a transport suitcase.





WEIGHING DISHES "ACCU-WEIGH"

Anti static. Reproducible tare weighing. Contamination free. Large selection of sizes.

Common features:

Made from high density polystyrene with flat base, round edge, contamination free surface and hydrophilic. Flexible in form for easy manipulation of the sample either liquid or solid.

Manufactured in two forms:

- Diamond form, colours white and black.
- Square form, colour white.

Part No.	Form	Capacity	Height / Width / Depth	Weight	Colour
5726004	Diamond	5	3.8 31 54	0.25	White
5726005	Diamond	5	3.8 31 54	0.25	Black
5726006	Diamond	30	13.5 55 85	1.00	White
5726007	Diamond	30	13.5 55 85	1.00	Black
5726008	Diamond	100	20 92 132	2.6	White
5726009	Diamond	100	20 92 132	2.6	Black
5726010	Square	7	8.5 44 44	0.65	White
5726011	Square	100	24 80 80	2.2	White
5726012	Square	250	24 134 134	6.1	White

Comes in packets of 100 units.



ALUMINIUM WEIGHING BOATS

Static free, pressed dishes with rolled edge.

Withstands temperatures up to 450 °C.

Due to their form the dishes can be used one on top of another to protect samples. Suitable for testing, solid samples and mixtures of emulsions for moisture content, by differential weight loss method.

Useful for weighing, comparing, freezing or evaporation.

Consumable, single use.

Part No.	Thickness mm	Height / Ø (usable) mm	Comes in
5726000	0.2	5 42	packets of 112 units
5726001	0.2	10 57	packets of 110 units



ANTIVIBRATION BALANCE TABLE

Formica covered metal table with central polished granite plate to support the balance, mounted on silent blocks.

Adjustable shock device. Maximum weight 40 Kg.

Part No.	Height / Width / Depth (exterior) cm	Height / Depth (balance support) cm	Weight Kg
5838101	80 90 70	45 39	70



BALANCE DENSITY MEASUREMENT "PR-SE" (PATENTED)

Applications: System for reading the density of liquids using the immersion of a glass sinker of known volume. Can be used for opaque and viscous liquids for all classes of liquid.

Features: Made of borosilicate glass of low dilatation coefficient and a constant volume.

Mode of operation:

- Locate the tube with liquid on an electronic balance.
- Push the TARE to achieve a zero stable reading
- Introduce and submerge the measuring suspended sinker centrally without tilting the tube, keep suspended.

At this moment the screen will indicate the DIFFERENTIAL WEIGHT, that is exactly the same as the density of the liquids multiplied by 10.

To obtain a density value in mS, it is necessary to have a balance with a minimum resolution of 0.01 g.

Part No.	Density interval g/ml	Maximum tolerance error g/ml	Temperature assay/reference °C
5600000	0.600 - 2.000	±0.0005	20 / 20



Calibrated precision weights class E2 and F1. Certification W.E.C.C. (Western European Calibration Co-operation)

COMMON FEATURES

In the manufacturing of these weights the meteorological requirements are applied to conform with the OIML verification for accuracy, raw material, geometric form, identification and conservation. To guarantee their accuracy, the individual weights are supplied in a partitioned wooden case with a clasp lid and a small tray housing for locating the mg weights. The wooden boxes are lined with velvet for the g and Kg weights.

Weight material

From 1 to 5 mg = aluminium, density approx. 2.7 g/cm³.

From 10 to 500 mg = alpaca, density 8.6 g/cm³.

From g and Kg = antimagnetic polished stainless steel, density approx. 8.0 g/cm³, Without adjustable chamber E2 and with adjustable chamber F1. The calibration certificate is expedited by DKD (member of the W.E.C.C.), which contains the determination and deviation between the nominal mass values, the actual measured value and the tolerance measurement.

Weight	Part No. Weight Class E2	Part No. Certificate E2	Tolerance Max. error ± mg	Part No. Weight Class F1	Part No. Certificate F1	Tolerance Max. error ± mg
1 mg	5838102	5838124	0.006	5838146	5838169	0.020
2 mg	5838103	5838125	0.006	5838147	5838170	0.020
5 mg	5838104	5838126	0.006	5838148	5838171	0.020
10 mg	5838105	5838127	0.008	5838150	5838172	0.025
20 mg	5838106	5838128	0.010	5838151	5838173	0.03
50 mg	5838107	5838129	0.012	5838152	5838174	0.04
100 mg	5838108	5838130	0.015	5838153	5838175	0.05
200 mg	5838109	5838131	0.020	5838154	5838176	0.06
500 mg	5838110	5838132	0.025	5838155	5838177	0.08
1 g	5838111	5838133	0.030	5838156	5838178	0.10
2 g	5838112	5838134	0.040	5838157	5838179	0.12
5 g	5838113	5838135	0.050	5838158	5838180	0.15
10 g	5838114	5838136	0.060	5838159	5838181	0.20
20 g	5838115	5838137	0.080	5838160	5838182	0.25
50 g	5838116	5838138	0.10	5838161	5838183	0.30
100 g	5838117	5838139	0.15	5838162	5838184	0.5
200 g	5838118	5838140	0.30	5838163	5838185	1
500 g	5838119	5838141	0.75	5838164	5838186	2.5
1 Kg	5838120	5838142	1.5	5838165	5838187	5
2 Kg	5838121	5838143	3.0	5838166	5838188	10
5 Kg	5838122	5838144	7.5	5838167	5838189	25
10 Kg	5838123	5838145	15	5838168	5838190	50



SET OF STANDARD WEIGHTS WITH BOX AND MATCHING CERTIFICATE

Set of weights E2 of 1 mg to 500 mg Part No. **5831822**

Set of weights F1 of 1 mg to 500 mg Part No. **5832822**

Material: Wooden box (E2), or resin box (F1), with clasp, tweezers and a small brush.

Weight details: 1 mg, 2 mg, 2 mg, 5 mg, 10 mg, 20 mg, 20 mg, 50 mg, 100 mg, 200 mg, 200 mg and 500 mg. Total 12 weights = 1.11 g

Certificate for set of weights E2 of 1 mg to 500 mg Part No. **5862350**

Certificate for set of weights F1 of 1 mg to 500 mg Part No. **5862450**

Set of weights E2 of 1 mg to 50 g Part No. **5831302**

Set of weights F1 of 1 mg to 50 g Part No. **5832302**

Material: Wooden box with clasp, lined with velvet, a special glove, housing for extractable fractional weights, tweezers and a small brush.

Weight details: 1 mg, 2 mg, 2 mg, 5 mg, 10 mg, 20 mg, 20 mg, 50 mg, 100 mg, 200 mg, 200 mg, 500 mg, 1 g, 2 g, 2 g, 5 g, 10 g, 20 g, 20 g y 50 g

Total 20 weights = 111.11 g

Certificate for set of weights E2 of 1 mg to 50 g Part No. **5862301**

Certificate for set of weights F1 of 1 mg to 50 g Part No. **5862401**

Set of weights E2 of 1 mg to 100 g Part No. **5831303**

Set of weights F1 of 1 mg to 100 g Part No. **5832303**

Material: Wooden box with clasp, lined with velvet, a special glove, housing for extractable fractional weights, tweezers and a small brush.

Weight details: 1 mg, 2 mg, 2 mg, 5 mg, 10 mg, 20 mg, 20 mg, 50 mg, 100 mg, 200 mg, 200 mg, 500 mg, 1 g, 2 g, 2 g, 5 g, 10 g, 20 g, 20 g, 50 g and 100 g

Total 21 weights = 211.11 g

Certificate for set of weights E2 of 1 mg to 100 g Part No. **5862302**

Certificate for set of weights F1 of 1 mg to 100 g Part No. **5862402**

Set of weights E2 of 1 mg to 200 g Part No. **5831304**

Set of weights F1 of 1 mg to 200 g Part No. **5832304**

Material: Wooden box with clasp, lined with velvet, a special glove, housing for extractable fractional weights, tweezers and a small brush.

Weight details: 1 mg, 2 mg, 2 mg, 5 mg, 10 mg, 20 mg, 20 mg, 50 mg, 100 mg, 200 mg, 200 mg, 500 mg, 1 g, 2 g, 2 g, 5 g, 10 g, 20 g, 20 g, 50 g, 100 g, 200 g y 200 g

Total 23 weights = 611.11 g

Certificate for set of weights E2 of 1 mg to 200 g Part No. **5862303**

Certificate for set of weights F1 of 1 mg to 200 g Part No. **5862403**



Model XTX-3C.



Model ZTX-20.

APPLICATIONS

By design and quality optics, these microscopes are recommended especially for long duration work. Ideally suited for biology, botany, archaeology, geology, teaching and electronics.

COMMON FEATURES

Three dimensional optical resolution, wide field of view without side aberrations, excellent crisp contrast and true colour.

Binocular head inclined at 45° with adjustable interpupillary distance from 55 to 75 mm.

Rotating head of 360° with easy access for large items.

Dioptric correction in the left eyepiece of ±5dp.

Ocular head held with secure fixing screws.

Rubber eyecups.

Pair of eyepieces, wide field of view WF 10x (23 mm Ø) in the model XTX-3C.

Pair of eyepieces, wide field of view WF 20x (20 mm Ø) in the model ZTX-20.

Objectives of 2 x and 4 x, located in a double objectives support turret with rotation in both directions.

Double focus: by means of a vertical slip clutch of the head up and down a column, with fine adjustment using a bilateral macrometer with rack and pinion tension and control.

Solid base consisting of a platform with double contrast (black and white) circular plate and translucent etched light diffuser, with fixing screw and holding clips.

Model XTX-3C: System with double illumination of low voltage 12 V/10 W, with incident light (episcopic) in the head and transmitted (diascopic) in the circular platform.

Model ZTX-20: system with triple illumination of low voltage, with incident light (episcopic) in the head and transmitted (diascopic) in the circular platform, Activated individually or simultaneously, with controllable intensity. Also the incident light incorporates a condenser lens with an extractable blue filter.

Dimensions: XTX-3C: 270 high x 117 wide x 190 mm deep.

Dimensions: ZTX-20: 350 high x 320 wide x 190 mm deep.

Stereomicroscope model XTX-3C.

Part No. **5313103**

Stereomicroscope model ZTX-20.

Part No. **5313080**

ACCESSORIES

Eyepiece with wide field of view WF 5x (single).

Part No. **5313032**

Eyepiece with wide field of view WF 10x (single).

Part No. **5313100**

Eyepiece with wide field of view WF 15x (single).

Part No. **5313033**

Eyepiece with wide field of view WF 20x (single).

Part No. **5313102**

Wooden box with handle and lock.

Part No. **5313022**

SPARES

Tungsten lamp 12 V / 10 W (for XTX-3C).

Part No. **5313025**

Halogen lamp 6 V / 12 W transmitted (for ZTX-20).

Part No. **5313040**

Halogen lamp 6 V / 15 W incident (for ZTX-20).

Part No. **5313043**

MODELS	Part No.	Objectives	Eyepieces	Magnification	Ø Field of view mm	Working Distance mm	Illumination	Weight kg
XTX-3C	5313103	2x	WF-10x	20x	10.0	57	Transmitted or incident	2.8
		4x		40x	5.0			
ZTX-20	5313080	2x	WF-20x	40x	6.5	80	Transmitted or incident independent or simultaneous	3.6
		4x		80x	3.2			

Comes complete with key for tightening the axis tension, spare lamp and plastic dust cover.



Model SQF-L.



Model SQF-D with Supplementary objective 2x.

APPLICATIONS

By design and quality optics, these microscopes are recommended especially for long duration work. Ideally suited for biology, botany, archaeology, geology, teaching and electronics.

COMMON FEATURES

Variable magnification using a continuous zoom control, with control knobs on either side to enable parfocal centralised focus.

Three dimensional optical resolution, wide field of view without side aberrations, excellent crisp contrast and true colour.

Optics are protected against knocks.

Binocular or Trinocular head (Model dependent), inclined at 45°.

Adjustable interpupillary distance from 55 to 75 mm.

Rotating head of 360° with easy access for large items.

Dioptric correction of ±5 dp in both eyepieces.

Ocular head fixed with secure screws.

Rubber eyecups.

Pair of eyepieces wide field of view WF20x (20 Ø) or WF10x (23 Ø) model dependent.

Macrometric focus: by means of a vertical slip clutch with a fine adjustment using rack and pinion tension control.

Solid base consisting of a platform with double contrast (black and white) circular plates and translucent etched light diffuser, with fixing screw and holding clips.

Triple illumination system, low voltage with incident light (episcopic) in the head and transmitted (diascopic) in the circular platform: activated individually or simultaneously, with controllable intensity. Also the incident light incorporates a condenser lens with an extractable blue filter.

Model SQF-E trinocular

Same characteristics to the SQF-D model, except that the head is trinocular and it is supplied with a photography adapter and eyepiece WF 10x with an adjustable focus visor (adaptable to a mount T2 PK suitable for supporting "Pentax" camera or similar). The photographic eyepiece and camera with support T2 PK and trigger cable have to be ordered as accessories.

ACCESSORIES

Supplementary objective 0.5x

Part No. **5313203**

Supplementary objective 1.5x

Part No. **5313205**

Supplementary objective 2x

Part No. **5313213**

Eyepiece with wide field of view WF 10x (single).

Part No. **5313100**

Eyepiece with wide field of view WF 15x (single).

Part No. **5313033**

Eyepiece with wide field of view WF 20x (single).

Part No. **5313102**

Eyepiece Photographic 2.5x.

Part No. **5313214**

Eyepiece Photographic 5x.

Part No. **5313215**

Digital reflex photographic kit

Part No. **5313222**

Adapter CCD of 0.5x suitable for a video camera.

Part No. **5313218**

Dark field + gem tweezers.

Part No. **5313050**

Wooden case with handle and lock.

Part No. **5313016**

SPARES

Halogen lamp 6 V / 12 W transmitted.

Part No. **5313040**

Halogen lamp 6 V / 15 W incident.

Part No. **5313043**

Technical table with the different magnifications, working distance and Ø of the field of view resulting in the configuration of the diverse eyepieces and supplementary objectives available.

MODELS	Part No.	Head	Zoom Range	Eyepieces	Standard magnification	Ø Field of view mm	Working distance mm	Illumination system	Weight Kg
SQF-L	5313211	Binocular	0.75x - 3.4x	10x	7.5x - 34x	26 - 5.8	90	Transmitted	5.5
SQF-D	5313209	Binocular	0.7x - 4.5x	20x	14x - 90x	16.4 - 2.6	93	or incident or both	6.1
SQF-E	5313208	Triocular	0.7x - 4.5x	20x	14x - 90x	16.4 - 2.6	93	simultaneously	6.4

Comes with a dust cover and 2 spare lamps.



Microscope Monocular "M-100 FL"



APPLICATIONS

Directed at the requirements of higher education, universities and suitable for: veterinary, dentistry, biology, industry, etc.

FEATURES

Monocular head inclined angle 45° and rotatable through 360°.

Eyepiece, with wide field of view WF 15x (18 Ø) fixed in position using secure screw.

Objectives, parfocal DIN 45 mm **achromatic bright-field** of 4x (A.N. 0.10), 10x (A.N. 0.25) and 40x retractable (A.N. 0.65).

Total magnification: 60x, 150x and 600x.

Revolving triple objectives turret, rotation in either direction with a fixed axis stop locator.

Focus, vertical slip clutch, bilateral **micrometer** adjustment of 0.002 mm, separate **macrometer** with adjustable tension. Safety fixing screw for tension adjustment and end of focus limit stop.

Stage with spring clip slide holder of 115 x 120 mm.

Condenser, fixed lens and aperture (A.N. 0.65), with diaphragm disk of 5 apertures.

Illumination, transmitted light (diascopic), tungsten 20W/220-240V, with collimator lens and blue filter for chromatic corrections.

Robust construction, with power switch and illuminator built into the base.

Dimensions: 360 height x 130 width x 175 mm depth. Weight 2.8 kg.

Supplied complete with key to adjust the tension of the slip clutch and cover.

Microscope monocular M-100 FL (600x).

Part No. **5313109**

ACCESSORIES

Eyepiece, Huyghens H-5x. Part No. **5313005**

Eyepiece, Huyghens H-10x. Part No. **5313006**

Eyepiece Widefield WF-10x with cross hairs (Pointer).

Part No. **5313007**

Eyepiece Widefield WF-10x with reticule.

Part No. **5313035**

Objective Achromatic Extra DIN 100x oil immersion, retractable (requires condenser Abbe 1.25 A.N.).

Part No. **5313008**

Condenser ABBE 1.25 A.N. with filter and iris diaphragm.

Part No. **5313003**

Graduated mechanical stage. Part No. **5313009**

Video Micro-camera, system PAL, resolution

350.000 pixels:

- **with direct TV monitor connection.**

Part No. **5435033**

- **with connection USB** for direct connection to a PC, including software.

Part No. **5435034**

Wooden case with carry handle and lock.

Part No. **5313022**

SPARE

Tungsten lamp 20 W / 220-240 V.

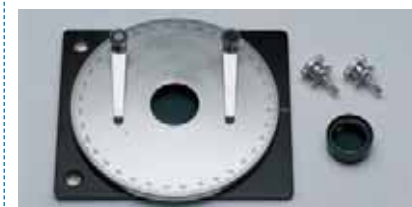
Part No. **5313001**



ACCESSORY

Set of polarisers with circular graduated base and filter.

Part No. **5902015**



Microscope Monocular "Zoom NK-101B"



APPLICATIONS

University studies, medicine, biology, geology and industrial electronics.

FEATURES

Monocular head inclined at 45° and rotatable through 360°.

Eyepiece DIN, wide field of view WF10x (18Ø).

Continuous Zoom Magnification system accommodated in the achromatic objective range 5x to 30x. Working distance: 8 mm.

Total magnification: 300x.

Stage 125 x 120 mm, height adjustable by bilateral **macrometer** and **micrometer** with separate slip clutch and tension screw.

Mechanical stage with longitudinal adjustable (x-y) of 30 mm and transversal adjustment of 60 mm.

Condenser Abbe 1.25A.N. with iris diaphragm and changeable filter.

Illumination, transmitted (diascopic) using a fluorescent lamp of 7W/220V.



MODEL	Part No.	Height / Width / Depth mm	Weight Kg
NK-101B	5313106	370 140 200	3

ACCESSORIES

Eyepiece Plan P-5x. Part No. **5313030**

Eyepiece Plan P-15x. Part No. **5313031**

Video Micro-camera, system Pal, resolution

350,000 pixels:

- **with direct TV monitor connection.**

Part No. **5435033**

- **with connection USB** for direct connection to a PC, inclusive of software.

Part No. **5435034**



Microscope + video-camera

SPARE

Fluorescent lamp 7 W / 220 V.

Part No. **5313024**



Microscopes "3000-A, 3000-B and 3000-C"

EXCELLENT RESOLUTION PLANACHROMATIC OPTICS. HIGH SPECIFICATION OPTICAL MICROSCOPES. MAXIMUM VERSATILITY WITH A WIDE RANGE OF CONFIGURATIONS, MODELS SHOWN ARE BINOCULAR AND TRINOCULAR WITH PHASE CONTRAST, BRIGHT AND DARK FIELD OPTICS, THIS INSTRUMENT IS IDEAL FOR A WIDE RANGE OF APPLICATIONS.

Optics Anti mould / Anti fungal

APPLICATIONS

Biology, bacteriology, cytology, immunology, diagnostics, pathology, agriculture, industry and university laboratories.

MODELS 3000-A (BINOCULAR) AND 3000-B (TRINOCULAR).

FEATURES

Head, binocular or trinocular (model dependant), inclined 30° with 360° rotation.

Interpupillary distance adjustable from 53 to 75 mm.

Dioptric adjustment of ± 5 dp in the left eyepiece, to compensate any visual differences.

Pair of DIN eyepieces wide field of view **WF 10x** (20 mm \emptyset).

DIN objectives, planachromatic bright field of 4x (A.N. 0.10), 10x (A.N. 0.25), 40x (A.N. 0.65) retractable and 100x (A.N. 1.25) oil immersion retractable, colour coded for rapid identification.

The planachromatic objectives provide an excellent image to the edge of the optical field of view.

Quadruple revolving objectives turret, rotates in both directions with spring ball stop locator when it is in the correct position.

Large substage of **210x140 mm**, rack and pinion adjustable height. Coaxial focus using controls located on both sides, graduated **micrometer** in steps of 0.002 mm and **macrometer** (with adjustable tension of up to 30 mm).

Safety stop with present adjustment.

Adjustable slide holder with a graduated scale of 0.1 mm, made up of a smooth (X-Y) rack and pinion mechanism, **longitudinal** and **transversal** movement of **50 mm** and **75 mm** respectively.

Abbe condenser of 1.25 A.N. precentred, with double lens, iris diaphragm and retractable from the front. Adjustable height using a rack and pinion mechanism.

The Abbe condenser can be easily replaced for special applications with a phase contrast condenser or a darkfield condenser (see accessories).

Illumination, diascope Köhler that is formed with a condenser lens, viewing diaphragm removable filters and a precentred, low voltage, adjustable intensity, halogen lamp (6V/20W).

Robust stable structure that includes the illumination system in the base, adjustable intensity potentiometer and On/Off switch.

Dimensions: 410 Height x 200 Width x 310 mm Depth.

Microscope Binocular Part No. 3000-A. Part No. 5901991

Microscope Trinocular Part No. 3000-B. Part No. 5901992



Model "3000-B". Part No. 5901992.

MODEL 3000-C PLAN PHASE CONTRAST - BINOCULAR.

FEATURES

Similar characteristics to the model 3000-A except for a special configuration of **Plan Phase Contrast objectives**:

The objectives, **DIN quality, are planachromatic with positive phase contrast** of 10x (A.N. 0.25), 25x (A.N. 0.4) 40x (A.N. 0.65) retractable and 100x (A.N. 1.25) retractable and oil immersion.

The condenser is a phase turret A.N. 1.25, with central telescope and a set of white, blue and green filters. With sharp detail for examination of transparent thin sections that can differentiate the refraction index that the human eye cannot differentiate. Excellent for applications in biology, medicine, crystallography, agriculture, industrial plastics and rubber etc.

Microscope Binocular model 3000-C. Part No. **5901993**

MODELS	Part No.	Head	Eyepieces	Objectives	Technique	Illumination	Weight kg
3000-A	5901991	Binocular	WF 10x (20 \emptyset)	Planachromatic (PL) 4x - 10x - 40x - 100x	Brightfield	Transmitted	8.4
3000-B	5901992	Trinocular		Planachromatic (PL) phase contrast 4x - 25x - 40x - 100x	Phase contrast	6 V / 20 W	8.7
3000-C	5901993	Binocular				halogen	8.4

Supplied complete with a set of blue, green and white filters, bottle of immersion oil η_D 1.515, spare lamp, fuse and a dust cover.

ACCESSORIES

See pag: 270



Trinocular fluorescence microscope "3001-F"



EXCELLENT RESOLUTION. POLYVALENT, CAN WORK IN EPIFLUORESCENT OR TRANSMITTED LIGHT MODE. WITH TRINOCULAR ADAPTER FOR CAMERA AND VIDEO CAMERA. PHASE CONTRAST AND DARK FIELD MODES AS ACCESSORIES.

OPTICS ANTI MOULD / ANTI FUNGAL

NEW

APPLICATIONS

Biology, cytology, oncology, genetics, scientific investigation, clinical diagnostics, epidemic prevention and embryology.

FEATURES

Trinocular head, inclined 45° and rotatable through 360°.

Interpupillary distance adjustable from 53 to 75 mm.

Dioptric adjustment of ±5 dp in the left eyepiece, to compensate for any visual differences.

Pair of wide field DIN eyepieces WF 10x (20 Ø).

Bright field planachromatic DIN objectives of 4x (A.N. 0.10), **10x** (A.N. 0.25), **40x** (A.N. 0.65) and an oil immersion retractable **100x** (A.N. 1.25) they are colour codified for a quick identification.

Planachromatic objectives provide an excellent image to the edge of the optical field of view.

Quadruple revolving objective turret, with both sides rotation and with a roller bearing and a notch stop.

Large sub stage of **210x140 mm**, **rack and pinion** height adjustable, by coaxial focus bilateral controls, graduated micrometer in steps of 0,002 mm and macrometer with adjustable tension (30 mm path). With transmitted light lock plate and **UV** radiation protection screen.

Safety stop with preset adjustable safety level.

Mechanical slide holder (moveable), with graduated scale of 0,1 mm, made up of a smooth movement mechanism (x-y), by a 50mm longitudinal and a 75mm transversal rack and pinion movement.

Abbe condenser of 1.25 A.N., precentred, with double lens, iris diaphragm and retractable **frontal lens**. Rack and pinion height, adjustable.

Abbe condenser can be easily replaced by a phase turret condenser (for contrast) or dark field condenser, for special observation conditions (see accessories).

Transmitted illumination (diascopic), according to Köhler, that consists of a condenser lens, a field diaphragm, removable filters and low voltage halogen precentred lamp of 6V/20W with adjustable intensity.

Robust stable structure that includes the illumination system, the intensity potentiometer and the On/Off switch on its base.



FLUORESCENCE UNIT

Mercury lamp of 100 W/DC

Lamp power supply connected to 110 V/220 V with intensity, voltage and power adjustable by a knob.

Illumination module for reflected fluorescence (UV.V.B. and G system).

The unit includes diaphragm, selectable attenuation filter and 5 positions filter disk: ultra-violet, violet, blue and green filters, and a empty position for transmitted light.

MODEL	Part no.	Eyepieces	Objectives	Technique	Illumination	Weight kg
30001-F	5901994	WF 10x (20 Ø)	Planachromatics (PL) 4x- 10x- 40x-100x	Epifluorescent	Transmitted 6v / 20w & Mercury fluorescence 100w / DC	10,5

Supplied complete with a set of blue, green and white filters, bottle of immersion oil η_D 1.515, mercury lamp 100 w, spare fuse and dust cover.

SPARE PARTS

halogen lamp 6 V / 20 W. Part No. **5313023**.

Mercury lamp 100 W DC. Part No. **5313055**

Fluorescence omega filters:

U.V. Part No. **5313056**

Violet. Part No. **5313057**

Blue. Part No. **5313058**

Green. Part No. **5313059**

ACCESSORIES

See pag: 270

ACCESSORIES

- Eyepiece with wide angle lens WF-5x** (single). Part No. **5313034**
- Eyepiece with wide angle lens WF-15x** (single). Part No. **5313004**
- Eyepiece with wide angle lens WF-16x** (single). Part No. **5902010**
- Eyepiece with wide angle lens WF-10x with reticule** (single). Part No. **5313035**
- Eyepiece with wide angle lens WF-10x with pointer** (single). Part No. **5313007**
- Contrast phase kit:** Objectives DIN, planachromatic positive phase contrast of 10x (A.N. 0.25), 25x (A.N. 0.4), 40x (A.N.0.65) retractable and 100x (A.N.1.25) retractable oil immersion and phase condenser turret, A.N. 1.25, with central telescope and a set of filters (Blue, White and Green). Part No. **5902005**
- Dark Field condenser:** Permits the observation of low contrast particles dispersed in a homogenous substrate, that appear luminous in a dark field.
 - Dark field condenser: A.N. 0.77 ~ 0.91 dry (low magnification). Part No. **5902006**
 - Dark field condenser: A.N. 1.25 ~ 1.40 oil immersion (high magnification). Part No. **5902007**
- Micrograph Kit,** camera mechanism WF 10x with a visor for focus correction and a photographic objective of 4x. (Adaptable for **Digital reflex photographic kit**). Part No. **5902008**
- Digital reflex photographic kit** Composed of a mount, a shutter and a SD memory card of 2Gb. Part No. **5313222**
- Adapter for a CCD video camera:** attachment. Part No. **5902009**
- Wooden case.** Part No. **5313016**



SPARE. Halogen lamp 6 V / 20 W. Part No. **5313023**

Microscope Binocular "701"

FEATURES

Binocular head with 45° tilt and full 360° rotation.
Interpupillary distance: 52 to 72 mm.
Dioptric adjustment of ±5 dp in both eyepieces, sharpness compensation for visual differences.
Pair of eyepieces DIN standard **WF10x** (18 mm Ø) and **WF16x**(11mm Ø).
Objectives DIN standard, achromatic, brightfield of 4x (A.N. 0.1), 10x (A.N. 0.25), 40x (A.N. 0.65) retractable and 100x (A.N. 1.25) immersion oil and retractable. Colour coded objectives for easy identification.
Total magnification: 1600x.
Four position objectives turret rotating in both directions with stop locator when it is in the correct position.
Large sub stage 135x145 mm, variable height with a rack and pinion mechanism with bilateral coaxial control. **Micrometer** adjustable stage graduated to 0.002 mm and **macrometer** adjustment tension, Movement up to 30 mm.
Safety stop with pre-set adjustable safety level.
Adjustable slide holder, with 0.1 mm scale with a smooth X-Y 40 mm longitudinal and 80 mm traversal movement.

Condenser Abbe of 1.25 A.N. with diaphragm iris and exchangeable filters. Rack and pinion height, adjustable.
Illumination transmitted (diascopic), with removable condenser lens and pre-centred halogen lamp of 6V/20W, with variable intensity control. Suitable for use with an external light source using a plan or concave reflector mirror.
Robust construction that incorporates the illumination source and mains switch in the base. Size: height 370 x width 200 x depth 225 mm. Weight 6 Kg.
 Supplied complete with blue, yellow and green filters, spare lamp, fuse, oil, dust cover and wooden carrying case with handle and lock.

Microscope Binocular 701. Part No. **5313101**



ACCESSORIES

- Eyepiece with wide angle lens WF-5x** (single). Part No. **5313034**
- Eyepiece with wide angle lens WF-15x** (single). Part No. **5313004**
- Eyepiece with wide angle WF-10x with reticule** (single). Part No. **5313035**
- Eyepiece with wide angle WF-10x with pointer** (single). Part No. **5313007**

SPARE

Halogen lamp 6 V / 20 W. Part No. **5313023**



Polarising Binocular Microscope 206



APPLICATIONS

Wide range of applications, includes bright-field, dark-field, polarization and phase contrast. Ideal for universities, clinics, biology, bacteriology, agriculture and industry.

FEATURES

Binocular head inclined 30° rotatable through 360°.

Adjustable interpupillary distance of 55 to 75 mm.

Diopter adjustment of ±5dp. in the right eyepiece, compensation for any differences in sharpness.

Paired eyepieces DIN, wide field of view **WF10x (180)** and a pair of **WF16x (0)**. **Objectives DIN, achromatic brightfield** of **4x (A.N. 0.10)**, **10x (A.N. 0.25)**, **40x (A.N. 0.65)** retractable and **100x (A.N.1.25)** oil immersion retractable; colour coded for rapid identification.

Total magnification: 1600x

Quadruple revolving objectives turret, rotates in both directions with notched location positions.

Large stage of **160 x 140 mm**, height adjustable by mechanical rack and pinion bilateral coaxial focus; **0.002 mm graduated micrometer** and **macrometer** with adjustable tension (distance 30 mm).

Pre-adjusted, Safety stop limit.

Mechanical stage, (slide holder), graduated scale of 0.1 mm, adjustable in both (x-y) using a smooth rack and pinion movement of **50 mm longitudinal** and **70 mm transversal**.

Condenser Abbe of 1.25 A.N. with iris diaphragm and replaceable filters.

Adjustable height by rack and pinion.

Illumination: transmitted (diascopic), with removable condenser lens and adjustable, pre-centred, low voltage halogen **6V/20W** lamp.

Strong and robust, illuminator incorporated into the base.

Set of simple polarisers: controllable analysis polariser.



Set of simple polarisers.

Comes complete with a set of blue, green and yellow filters, set of simple polarisers, lamp, 2 spare fuses, bottle of immersion oil and plastic cover

SPARE

Halogen lamp 6 V / 20 W. Part No. **5313023**

ACCESSORIES

Eyepiece with wide angle lens WF-5x (single) Part No. **5313034**

Eyepiece with wide angle lens WF-15x (single) Part No. **5313004**

Eyepiece with wide angle lens WF-10x with reticule (single) Part No. **5313035**

Eyepiece with wide angle lens WF-10x with pointer (single) Part No. **5313007**

Complete kit for phase contrast, made of: Objectives DIN plan negative phase contrast: **10x (A.N. 0.25)**, **40x (A.N. 0.65)** and **100x (A.N. 1.25)** retractable oil immersion, condenser turret phase A.N. 1.25, central telescope and blue filter.

Part No. **5313017**

Darkfield condenser: Permits the observation of low contrast and small size, dispersed in a homogeneous substrate samples which they appear luminescent under a uniform darkfield.

Darkfield condenser A.N. 0.83 - 0.91 dry (operable under low magnification).

Part No. **5313018**

Darkfield condenser A.N. 1.25 - 1.36 oil immersion (operable under high magnification).

Part No. **5313019**

Video Microcamera, system PAL, resolution 350,000 pixels:

- with video plug for direct connection to a TV monitor. Part No. **5435033**

- with a USB connection for direct connection to a PC, includes software.

Part No. **5435034**

MODEL	Part No.	Height / Width / Depth mm	Power supply	Weight Kg
206	5313105	425 245 335	220 V / 50 Hz	7.5



5313017



5313018



5313019



5435033 or 5435034



Microscope biological inverted, trinocular "XDS-1B"

ISO 9001



APPLICATIONS

Optical microscope with many benefits, specially designed for biomedicine, biology and for culture analysis in matrix flasks and in microtitre plates, flasks, culture vessels, tubes etc. through the use of its objectives and long working distance condenser, technique uses brightfield or phase contrast.

FEATURES

Robust stable design with lateral arm wrist supports for maximum comfort and easy manipulation.

Trinocular head, inclined 45°.

Interpupillary distance adjustable from 55 to 77 mm.

Diopter correction of ±5dp in the left eyepiece, used to correct differences in sharpness.

Pair of DIN wide field WF 10x (20 Ø), pair of **WF 16x** (14 Ø), plan eyepiece **PF 10x** (17.4 Ø). **Reticule** with 0.1 mm/div, telescopic central eyepiece phase contrast DZ11x DZ11x and trinocular photography eyepiece **S 5x** (9.5 Ø).

Objectives DIN planachromatic brightfield, long working distance LWD PL of 10x (A.N. 0.25/working distance W.D.=7.9 mm), 25x (A.N. 0.40/W.D.=5 mm), 40x (A.N. 0.40/W.D.=3 mm) and on **negative phase contrast LWD PL ph** of 25x (A.N. 0.25/W.D.=5 mm), colour coded for rapid identification.

Maximum thickness acceptable for receptacle bases 1.5 mm.

Quadruple objectives turret with rotation in both directions with a roller bearing and notch stop. Rack and pinion height adjustment mechanism with bilateral coaxial focus controls: **micrometer** of 0.2 mm rotation graduated at 0.002 mm increments and **macrometer** with adjustable tension.

Total working distance 12 mm.

Condenser with long working distance (55.2 mm) LWD 0.3 A.N., brightfield and phase contrast. Precentred, with iris diaphragm and flip out phase contrast. **Including a phase ring of 25x.** Rack and pinions mechanism for height regulation or lateral removal for more height receptacles of up to 145 mm.

Large stage: dimensions 180x155 mm. Includes 2 holding clips for tubes and slides and 4 insert disks of varying size for optimum accommodation of differing sample vessels: plates and or culture flasks, microtitre plates, etc.

Mechanical sub-stage with graduated scale of 1 mm and vernier of 0.1 mm, made up of a smooth mechanism (x-y) rack and pinion drive with 50 mm longitudinal and 75 mm transversal.

Illumination system, diascope transmitted light by a halogen lamp of 6 V / 20W, precentred by external knobs and controllable intensity.

The unit includes a field diaphragm with filter carousel of green, yellow, blue and grey.

MODEL	Part No.	Height / Width / Depth exterior cm	Weight Kg
XDS-1B	5901998	50 28 30	15



Comes complete with 2 flasks, 2 culture plates, wooden holder for eyepieces, objectives and accessories, 2 lamps, 2 spare fuses and a protective cover.

ACCESSORIES

Objectives planachromatic long working distance Negative phase contrast:

Objective LWD PL ph 10x
(A.N. 0.25 160/1.5 W.D.=7.9 mm)

Part No. **5313190**

Objective LWD PL ph 40x
(A.N. 0.60 160/1.5 W.D.=3 mm)

Part No. **5313192**

Phase contrast ring 10x.

Part No. **5313191**

Phase contrast ring 40x.

Part No. **5313193**

CCD video camera eyepiece

SO.65x.

Part No. **5313220**

Adapter thread C
for video camera CCD.

Part No. **5313219**

Video camera CCD.

Part No. **5435038**

Digital reflex photographic kit, composed of a mount, a shutter and a SD memory card of 2Gb.

Part No. **5313222**

Photographic eyepiece S6.3x.

Part No. **5313221**

SPARES

Halogen lamp 6 V / 20 W. Part No. **5313023**

5313190 5313192



5313191 5313193



5313219

5435038



5313222

APPLICATIONS

Microscope with high capabilities.

Made for large sample observations. Samples are placed on top of an open obstruction free stage.

Binocular or Trinocular configuration with a range of accessories, that convert the instrument into a versatile microscope ideal for the identification and analysis of different materials and alloys. Suitable for a wide range of scientific research applications in metallurgy, physical properties of metals, heat treatments and quality control.

FEATURES

Head, binocular or trinocular (model dependent), 30° inclined angle.

Adjustable interpupillary distance from 55 to 77 mm.

Dioptric adjustment of ± 5 dp in the left eyepiece, compensating for any visual differences.

Paired eyepieces, DIN quality. Wide field of view **WF 10x** (16 mm \emptyset).

Objectives DIN grade, planachromatic brightfield of **10x** (A.N. 0.25), **25x** (A.N. 0.40), **40x** (A.N. 0.65), retractable, and **100x** (A.N. 1.25), retractable, using immersion oil. Colour coded for easy and rapid identification.

Magnification range: 100x, 250x, 400x and 1000x.

The planachromatic objectives provide an excellent image, free from aberrations at the edge of the field of view.

Quadruple rotating objectives turret, rotates in both directions with stop locator when in the correct position.

Large sub stage of 150x200 mm, rack and pinion adjustable height, with bilateral coaxial focus. Micrometer graduated in 0.002 mm steps and **macrometer**, with adjustable tension up to 19 mm.

Safety stop with a pre-set safety level.

Slide holder with scale of 0.1 mm, with a smooth X and Y rack and pinion movement of 15 mm **longitudinal** and 15 mm **traversal** movement.

Illumination: incidental (episcopic), Köhler, that consists of a condenser lens, condenser Abbe of 1.25 A.N., pre-centred with an iris diaphragm,



Model trinocular 17AT.

filters and a pre-centred halogen 6 V / 20 W low voltage controllable light source. **Structure, robust** with an illumination system in the base, intensity potentiometer and illumination switch.

Dimensions: 41 height x 20 Width x 31 cm depth.

Weight Model 17A: 10.5 Kg. Model 17 AT: 11 Kg.

Comes complete with a set of filters: blue, yellow and green, bottle of immersion oil, lamp, spare fuse dust cover and a wooden case.

Microscope Binocular Part No. 17A. Part No. 5901999

Microscope Trinocular Part No. 17AT. Part No. 5902000

SPARE

Halogen lamp 6 V / 20 W. Part No. 5313023

ACCESSORIES



5313222

Digital reflex photographic kit composed of a mount, a shutter and a SD memory card of 2Gb. CMOS sensor higher than 10 megapixels. Speed up to 3 pictures per second. LCD display of 2,5 inches. Processed with total image control. Large area viewfinder and high luminosity.

Part No. **5313222**

Screw on adapter C for a video CCD camera. Part No. **5902009**

Eyepiece with wide field, of view WF-16x (single).
Part No. **5902010**

Eyepiece with wide field, of view WF-20x (single).
Part No. **5902011**

Eyepiece plan view, 10x micrometric 0.1 mm/div. (single).
Part No. **5902012**

Eyepiece plan view, 12.5x (single).
Part No. **5902013**

Micrograph Kit comprising of:
Photographic adapter mechanism with eyepiece WF-10x with focus adjustment visor and objective of 4x (adaptable to **Digital reflex photographic kit**).
Part No. **5902014**



5902014



Microcameras "R-350" and monitor



FEATURES

Revolutionary for its small size. Quality image, digital technology. Can be directly used with a monitor or TV via an a euro connector. Can be input to a video for recording images. (Suitable for a PC with a PCI card for image processing and storage on diskettes or a hard drive). Designed for different applications, especially for diagnostics of dermatological illnesses of the skin scalp or capillary fibre. Other magnifications available: 10x, 100x and 200x.

Sensor CCD 1/3inches
Resolution lines 400
Pixels (H x V) 320000
System PAL/NTSC
Minimum illumination 1 LUX
S/R better than 46 db
Horizontal line frequency 15625 Hz
Vertical line frequency 50 Hz
Light source for model R-350x 0.2 W
Power consumption 2W
Voltage 6V (220-50Hz)
Dimensions: Model R-350-350x 115 x 55 Ø mm
Dimensions: Model R-350-2x 110 x 32 Ø mm
Weight 0.3 Kg

MODELS

14" Monitor. Part No. **5435031**
R-350-2x. 2 magnification, with euro connector.
Part No. **5435038** System PAL
Part No. **5435032** System NTSC
Suitable for microscopes:
3000C Part No. **5901993** **3001F** Part No. **5901994**
SQF-E Part No. **5313208** **17AT** Part No. **5902000**
XDS-1B Part No. **5901998**
R-350-350x. 350 magnification, with euro connector, suitable for monitor or TV monitor.
Part No. **5435035** System PAL
Part No. **5435036** System NTSC



Microcamera model R-350 2x, suitable for microscopes.



Microcamera model R-350-350x, with euro-connector suitable for a monitor or TV.



Eyepiece video camera

ADAPTS DIRECTLY ONTO THE EYEPIECE OF THE MICROSCOPE.

Micro video camera, PAL system, resolution 350.000 pixels
- with video output connection direct to a TV monitor. Part No. **5435033**
- with a USB connection, direct to a PC, includes software. Part No. **5435034**



Light source, cold source, fibre optic "Z-150"

CONSTANT COLOR

APPLICATIONS

Microscopy illumination for small samples free from colour alteration. Especially recommended for microphotography of live biological samples, cultures, micro-organisms, process control, electronic components, dental studies, etc.

FEATURES

Halogen lamp 150 W. Adjustable illumination intensity control. Forced air circulation. Heat absorption filter. Safety transformer fitted. Primary fuse protection.

CONTROL PANEL

Mains switch. Potentiometer controlled light intensity.

MODEL

Part No.	Height / Width / Depth exterior cm	Power W	Weight Kg
5901016	15 19 25	150	4

SPARE Lamp 150 W.
Part No. **5901017**

Supplied with double flexible arm 50 cm long.



Microscope accessories and consumables



GLASS SLIDES

Glass slides (smooth): 26 x 76 x 1.5 mm.
Part No. **5600400** Box of 72.
Glass slides (matt end for notes): 26 x 76 x 1.5 mm.
Part No. **5600399** Box of 72.
Cover slip: 18 x 18 mm.
Part No. **5600396** Box of 100.
Cover slip: 22 x 22 mm.
Part No. **5600397** Box of 100.
Cover slip: 24 x 24 mm.
Part No. **5600398** Box of 100.



SLIDE DISPENSER

Base made of ABS with a transparent Polycarbonate lid, with rotating manual dispenser of individual slides. Capacity 50 slides of 76 x 26 mm.
Part No. **1001366**



CLEANING KIT

Suitable for optical microscopes.
Part No. **5313000**



WOODEN MICROSCOPE BOX

Solid wood, microscope box, of 3 mm thickness, treated with varnish, fitted with a metallic door, clasp lock and a carry handle.
Microscope Box suitable for Model M-100FL, XTX-3C and ZTX-20.
420 high x 255 wide x 285 mm deep. Part No. **5313022**
Microscope Box suitable for Model SQF-L, SQF-E, 2000-A, 2000-B and 2000-C.
Internal dimensions: 420 high x 265 wide x 317 mm deep.
Part No. **5313016**

Slide support, Slide box for storing slides, slide staining stands, etc. (See pages 210 to 214).



Refractometer ABBE "2WAJ"

LCD DIGITAL THERMOMETER BUILT-IN.

APPLICATIONS

Ideal for measuring the refractive index n_D of liquids, solids and sugar concentrations (0 - 95% = n_D 1.333-1.531).

Indispensable instrument for industrial chemistry, petroleum, pharmaceutical, food oils and fats, sugars, universities etc.

FEATURES

Telescopic system X2 magnification.

Eyepiece with dioptric correction.

Connection for external water bath.

Thermometer 0-70 °C. To see the sample temperature.

Robust metallic construction.

Weight: 2.6 Kg.

Measurements: 240 mm high x 100 mm wide x 200 mm depth.

Measuring range:

Refraction index n_D : 1300 - 1700.

Brix: 0 - 95%.

Measuring definition:

Refraction index n_D : 0.0005.

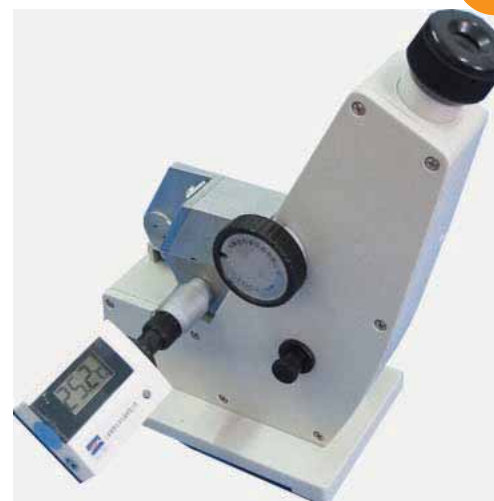
Precision n_D : ± 0.0002 .

Brix: 0.25%. Precision: $\pm 0.1\%$.

Part No. 5901008

Supplied complete with

- Aluminium carry case,
- 1 bottle of Naphthalene Bromide,
- 1 calibration standard,
- 1 screwdriver and dust cover.




Digital ABBE refractometer "WYA-2S"

APPLICATIONS

Ideal for measuring the refractive index of liquids, solids and sugar concentrations (° Brix), industry: chemical, petroleum, food, pharmaceutical, universities and research etc.

FEATURES

Apparatus equipped with an optical system made of a telescope with dispersion correction, used to define the division line between dark and bright areas. 

Precise optics with automatic temperature compensation displayed as °Brix and sample temperature.

Stabilized temperature connection for a water bath. RS-232 output with software included.

Measuring range:

Refraction index n_D : 1.3000 - 1.7000

Brix Bx - TC: 0 - 95%

Brix Bx: 0 - 95%

Measurement scale definition:

Refraction index n_D : ± 0.0002

Brix Bx - TC: $\pm 0.1\%$

Brix Bx: $\pm 0.1\%$

Temperature:

Working range: 0 - 50 °C.

Correction range of Bx, in respect to temperature: 15 - 45 °C.



Supplied complete with dust cover and maintenance box that includes:

- 1 bottle of Naphthalene Bromide,
- 1 calibration standard,
- 1 Hex key,
- 3 lamps 6.3V, 0.25 A.
- 3 fuses 1 A.

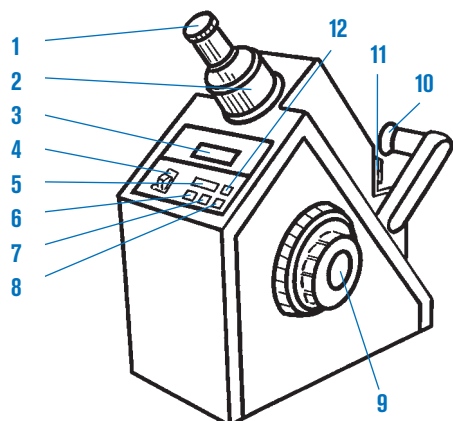
Optimum precision



MODEL

Part No.	Height / Width / Depth (exterior) cm	Power supply	Weight Kg
5901007	38 18 33	220V $\pm 20V$ 50Hz	10

CONTROL PANEL



Technical description

1. Monocular system.
2. Telescope adjustment.
3. Digital display.
4. Mains switch "POWER".
5. Push button "READ".
6. Push button for Brix with temperature correction "Bx - TC".
7. Push button for the refractive index " n_D ".
8. Push button for Brix without temperature correction "Bx".
9. Optical control.
10. Light intensity unit.
11. Refractometer prism.
12. Push button for temperature indicating. "TEMP".



Refractometers



COMMON FEATURES

- Robust metal construction.
- Excellent optical quality.
- Eyepiece with adjustable dioptic ring to compensate any visual sharpness.
- Easy to use, with direct easy to read scales.
- Adjustable calibration screw.
- Supplied complete with pouch, Pasteur pipette and screwdriver.



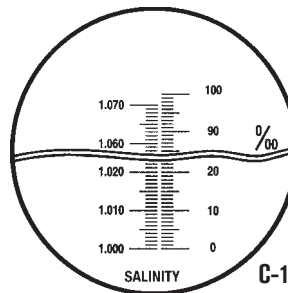
REFRACTOMETER FOR SALINITY ‰ AND DENSITY “C-1”

APPLICATIONS

For the investigation in clinical laboratories (solutions and dissolutions). Industry, food provisions (vegetables, fruit, fish and shell fish).

TECHNICAL SPECIFICATION

- Automatic compensation
- Temperature: 10 - 30 °C.
- Salinity range: 0 to 100 ‰.
- Division Scale: 1 ‰.
- Density: 1000 - 1070.
- Division scale: 0.001.
- Part No. **5901001**



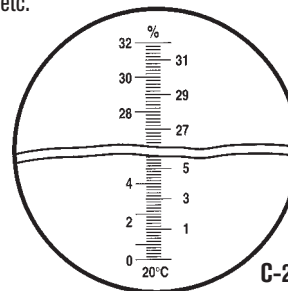
REFRACTOMETER BRIX% INDEX “C-2”, “C-3”, “C-4” AND “C-5”

APPLICATIONS

Concentrates of sugar in fruit, juices, gaseous drinks, milk, wine, industrial oils etc.

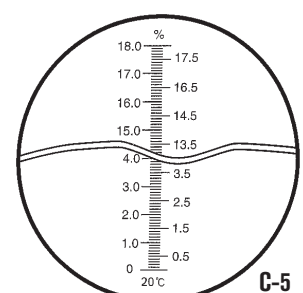
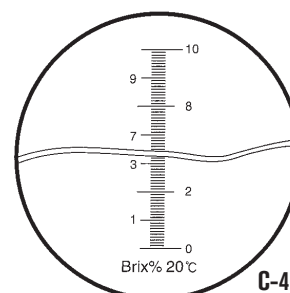
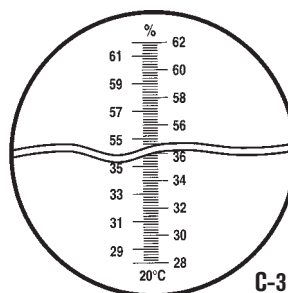
TECHNICAL SPECIFICATION

- “C-2” Range Brix: 0 - 32 %.
- “C-3” Rango Brix: 28 - 62 %.
- Division scale: 0.2 %.
- Precision ±0.2 %.
- “C-4” Rango Brix 0 - 10 %.
- “C-5” Rango Brix 0 - 18 %.
- Division scale: 0.1 %.
- Precision: ±0.1 %.



Part No.

- 5901002** Model C-2
- 5901020** Model C-2 with temperature compensation
- 5901003** Model C-3
- 5901021** Model C-3 with temperature compensation
- 5901022** Model C-4
- 5901023** Model C-4 with temperature compensation
- 5901024** Model C-5
- 5901025** Model C-5 with temperature compensation



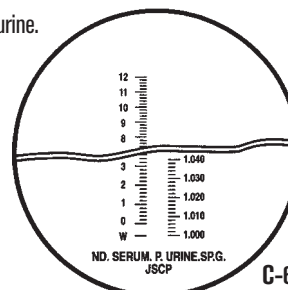
CLINICAL REFRACTOMETER 2 SCALES “C-6”

APPLICATIONS

Suitable for the determination of proteins, serum and specific gravity (density) of urine.

TECHNICAL SPECIFICATION

- Proteins in serum: 1 - 12 g/100 ml.
- Division scale: 0.2 g/100 ml.
- Urine density: 1000 - 1040.
- Division scale: 0.002.
- Part No. **5901006**



APPLICATIONS

Model NR-151. Measurement of % Brix and refractive index n_D .

Ideal for concentrations of sugars in % Brix and the measurement of refractive index n_D . For fruit, juices, drinks, milk, wine, edible oils, food industry, chemicals, pharmaceutical, science, petrochemical, oils, lubricants etc.

Model NR-101. % Brix, refractive index n_D and % salinity.

Ideal for concentrations of sugar % Brix, measuring refractive index n_D and NaCl in % of salinity.

Ideal for fruit, juices, drinks, milk, wine, edible oils, food industry, chemicals, pharmaceutical, science, petrochemical, oils, lubricants etc.

COMMON FEATURES

Portable and easy to use.

Alphanumeric display.

Determinations using a high precision photo cell integrated to a CCD camera and digital image processor.

Chamber prism of anti corrosive stainless steel and lid.

Automatic temperature compensation (ATC) to 20 °C, with a sample temperature range from 5 to 40 °C.

Temperature selection °C or °F.

Calibration using distilled water.

Function selection limits and tolerable alarms.

Microprocessor with instant response.

Disconnects automatically if inoperable for 3 minutes.

Low voltage alarm.

Power supply 9V battery.

Operating temperature from 0 to 40 °C at up to 90% relative humidity and a maximum height of 2000 m above sea level.



Model NR-151



Model NR-101

MODELS	Part No.	Reading and Measurement	Measurement range	Measurement Resolution	Measurement Precision	Temperature Range	Temperature Resolution	Temperature Precision	Height/Width/Depth cm	Weight Kg
NR-151	5901012	Brix %	0.0 - 95.0%	0.1%	±0.1%	0 +40 °C 32 +140 °F	0.1 °C 0.2 °F	±1 °C ±2 °F	6 18 10	0.9
		Refraction index n_D	1.3330 - 1.5318 n_D	0.0001 n_D	±0.0002 n_D					
NR-101	5901013	Brix %	0.0 - 60.0%	0.1%	±0.1%	0 +40 °C 32 +140 °F	0.1 °C 0.2 °F	±1 °C ±2 °F	6 18 10	0.9
		Refraction index n_D	1.3330 - 1.4419 n_D	0.0001 n_D	±0.0002 n_D					
		Salinity %	0.0 - 28.0 %	0.1 %	±0.1 %					

Comes complete with protective carry case, dosing burette, bottle of distilled water and a 9V battery.

Disk polarimeter “polar-2010”

LAURENT TYPE MODEL
SODIUM LAMP ILLUMINATION

NEW

APPLICATIONS

Designed for colleges and universities, chemical laboratories, pharmaceutical, clinics, cosmetics and food industry.

FEATURES

Vernier reading definition. Angle $\pm 0,05^\circ$.

Measuring range of optical rotation: $\pm 180^\circ$.

Rotation scale division: 1° .

Measuring lens 4x.

Ocular with dioptries adjustment.

Slide rack compartment length: for tubes up to 220 mm.

Monochromatic lamp wave length: 589,3 nm.

MODEL

Part No	External measurements cm. Height / Width / Depth	Consumption W	Weight Kg
5120210	32 43 14	20	5





Automatic Melting Point Apparatus "WRS-2A"

AUTOMATIC DETERMINATION NO VISUAL CONTROL REQUIRED.



A different conception.

Totally automatic, without the need to visually

determine the melting point process

APPLICATIONS

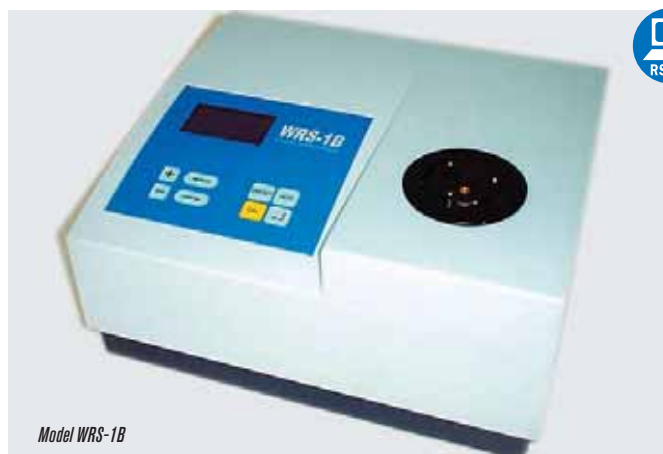
Research laboratories, quality control. Test and control of purity after synthesis in pharmaceutical laboratories.

AUTOMATIC MELTING POINT WRS-1B

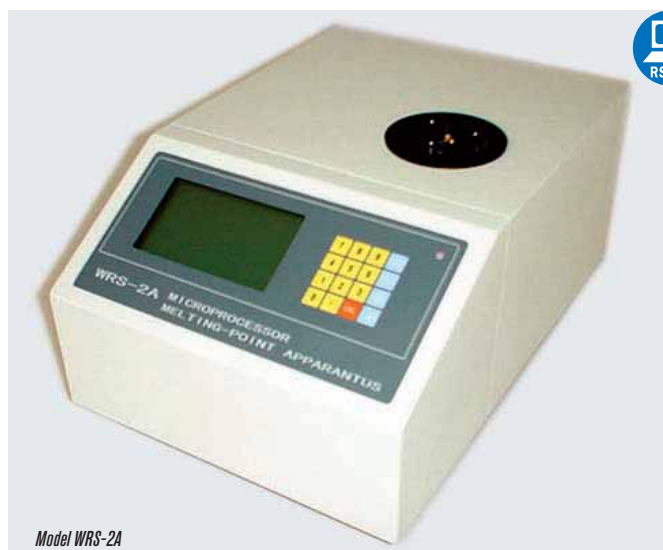
Single sample analysis
LCD display, simple alphanumeric keypad.
Melting point determination by photoelectric detection.
Automatic functions. Reads and registers the starting point, fusion point and end point.
Part No. **5609401**

AUTOMATIC MELTING POINT WRS-2A

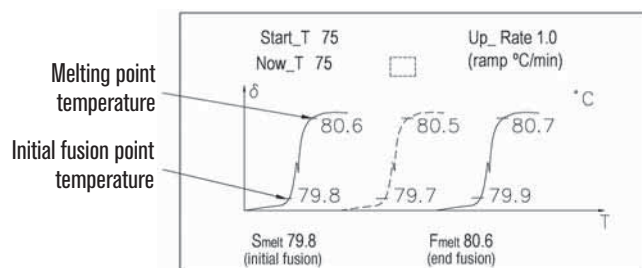
Simultaneous analysis, three samples.
LCD graphic display and 16 keys numeric keypad.
Melting point determination detector photoelectric.
Automatic functions. Reads and registers the starting point fusion point, end point, melting point curve and average value determination.
Part No. **5609402**



Model WRS-1B



Model WRS-2A



Details of graphic display, calculated average of melting point curves.

MODELS	WRS-1B	WRS-2A
Part No.	5609401	5609402
Digital LCD screen	Numeric	Numeric and graphical
Maximum capillary tube capacity, 1.4 mm Ø ext.	1	3
Temperature range	from 50 °C to 300 °C	
Readable temperature resolution	0.1°C	
Melting point measurement precision	Upto 200 °C ±0.5 °C and from 200 °C to 300 °C ±0.8 °C	
Selectable ramp rate in °C/minute	0.2 - 0.5 - 1 - 1.5 - 2 - 3 - 4 and 5 °C/min.	
Repeatability	0.4 °C ramp rate of 1 °C/min	0.3 °C ramp rate of 1 °C/min. 0.2 °C ramp rate of 0.2 °C/min.
	increasing	from 50 °C of 300 °C 3 minutes
Decending time to reach the start temperature	decreasing	from 300 °C of 50 °C 5 minutes
Sample holder	for capillary tubes of 1.4 mm Ø ext. / 1 mm Ø int.	
Sample fill height	3 mm	
Output interface RS-232	9600 baudrate, 1 bit stop and 8 data bits	
Power	110 W	
Weight	9.5 Kg	12.5 Kg
Weight / Dimensions, height x width x depth in mm	380 x 315 x 200	398 x 278 x 210

Supplied complete with 1000 capillary tubes of 1.4 mm Ø ext set of maintenance tools comprising of star and flat screwdrivers, drill bit of 1.5 mm Ø, allen key 3 mm, lamp and fuse, software and protective cover.

ACCESSORY Capillary tubes of 1.4 mm Ø ext. 1.0 mm Ø int. Box of 5000 tubes Part No. **5609404**

SPARE Lamp 6.5 V 0.3 A. Part No. **5609405**