

Microscope Slides & Cover Slips

Product Britishing Catalog Cate 2021

100













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Microscope Slides (non-color)

26 x 76 mm, thickness approx. 1.0 mm, in accordance with ISO 8037/1.

German made extra white low iron soda-lime float-glass, cleanly washed and polished, ready to use, packed by 50 pieces in fibre free boxes and by 5,000 pieces in stable shipping cartons.

All our products are available with CE/IVD marking (optional).



Item no.	Туре
VA111001FKB.01	cut edges
VA111101FKB.01	cut edges / 20 mm twin frosted end
VA112001FKB.01	ground edges 45°
VA112101FKB.01	ground edges 45° / 20 mm twin frosted end
VA113001FKB.01	ground edges 90°
VA113101FKB.01	ground edges 90° / 20 mm twin frosted end
VA114001FKB.01	beveled edges
VA114101FKB.01	beveled edges / 20 mm twin frosted end

Other glass types available on request.





StarFrost[®] - Microscope Slides (color-frosted)

StarFrost® - Microscope Slides - uncoated

26 x 76 mm, thickness approx. 1.0 mm, in accordance with ISO 8037/1.

German made extra white low iron soda-lime float-glass, 20 mm singlesided color-frosted marking area, hydrophilic, cleanly washed and polished, ready to use, packed by 50 pieces in fibre free boxes and by 5,000 pieces in stable shipping cartons.



The color-frosted end is resistant against all common lab chemicals, high pH, pressure cooker etc. and suitable for all common sterilization methods.

Marking with pen, pencil and lab marker is possible.

All our products are available with CE/IVD marking (optional).

ltem no.	Туре
VS1117#1FKB.01	cut edges
VS1127#1FKB.01	ground edges 45°
VS1137#1FKB.01	ground edges 90°
VS1147#1FKB.01	beveled edges



StarFrost[®] - Microscope Slides are available in 7 different standard colors:



StarFrost[®] - Printer Slides – Ink-Jet Printer suitable

With clipped corners to minimize glass chips. Special print on the bottom of the slide to keep the rack levelled and avoiding scratches on the glass surface.

Paint especially developed for ink-jet-printers. Leica IPS® and Sakura Auto-Write® approved!

ltem no.	Туре
VS1158#1FKB.01	ground edges 90° printer slides
VS1158#1FKA.01	ground edges 90° printer slides, Adhesive
VS1158#1APN.0x	ground edges 90° printer slides, Advanced Adhesive
VS1158#1FKC.01	ground edges 90° printer slides, Polycat



StarFrost[®] - Printer Slides – Thermal-Transfer Printer suitable

With clipped corners to minimize glass chips. Special print on the bottom of the slide to keep the rack levelled and avoiding scratches on the glass surface.

Paint especially developed for thermal-transfer-printers. Thermo Scientific SlideMate I and II, Primera Signature Printer, Vogel etc.

ltem no.	Туре
VS1159#1FKB.0x	ground edges 90° printer slides
VS1159#1FKA.0x	ground edges 90° printer slides, Adhesive
VS1159#1APN.0x	ground edges 90° printer slides, Advanced Adhesive
VS1159#1FKC.0x	ground edges 90° printer slides, Polycat

StarFrost[®] - Microscope Slides are available in 6 different standard colors:



StarFrost[®] - Microscope Slides ADHESIVE

Silane coating. For routine staining applications. Hydrophobic surface tension.

Item no.	Туре
VS1117#1FKA.01	cut edges
VS1127#1FKA.01	ground edges 45°
VS1137#1FKA.01	ground edges 90°
VS1147#1FKA.01	beveled edges

StarFrost® - Microscope Slides ADVANCED ADHESIVE

This coating has been developed especially **for the use in Immunohistochemistry (IHC)** and other harsher applications. Strong tissue adherence, no tissue-falling-off issues anymore!

In addition the staining itself has been improved as well. Hydrophilic surface tension.

Premium packing without extra charges for StarFrost[®] Advanced Adhesive slides: by 50 pcs. wrapped in cellophane in fibre-free boxes and by 1,500 pcs. sealed in tropical pouches, in cartons.

Item no.	Туре
VS1117#1APN.0x	cut edges
VS1127#1APN.0x	ground edges 45°
VS1137#1APN.0x	ground edges 90°
VS1147#1APN.0x	beveled edges

StarFrost[®] - Microscope Slides POLYCAT

Poly-L-Lysine coating.

ltem no.	Туре
VS1117#1FKC.01	cut edges
VS1127#1FKC.01	ground edges 45°
VS1137#1FKC.01	ground edges 90°
VS1147#1FKC.01	beveled edges

StarFrost[®] - Microscope Slides are available in 7 different standard colors:



100 % Quality Controlled

StarFrost[®] - Haematology slides

Extra hydrophilic surface for perfect blood smears.

Extra surface cleaning module installed.

Super clean and scratch-free surface guaranteed thanks to automated Vision Control System:

Every single slide is camera-inspected and non-conforming products are automatically sorted out.

The 20mm color-frosted end is compatible with Ink-Jet as well as with Thermal Printers!

Premium packing without extra charges for StarFrost[®] Haematology slides: by 50 pcs. wrapped in cellophane in fibre-free boxes and by 1,500 pcs. sealed in tropical pouches, in cartons.

 Item no.
 Type

 VS1157#1APH.01
 ground edges 90°, clipped corners

StarFrost[®] - Microscope Slides are available in 7 different standard colors:



Diagnostic Slides

Diagnostic slides are available with different standard and customized masks.

Hydrophobic PTFE paint or Super-Hydrophobic paint to avoid cross-contamination and increased microliter capacity.

The diagnostic slide provides a wettable (hydrophilic) well

area, which enhances cell attachment and spreading capabilities while the mask retains its hydrophobic characteristics.



Diagnostic slides are also available with our Adhesive, Advanced Adhesive and Polycat coating.

For annual quantities < 20,000 pcs. the layout is printed on every single slide. For this semiautomated process with higher manual effort only slides with edges ground 45° can be processed.

annual quantities: < 20,000 pcs. – ground edges 45°

Item no.	Туре
VG1121#FKC.01	PTFE paint - uncoated wells (hydrophilic)
VG1121#FKD.01	PTFE paint - Adhesive coated wells (silane)
VG1121#APF.01	PTFE paint - Advanced Adhesive coated wells
VG1121#FKL.01	Super-Hydrophobic paint – uncoated wells

For annual quantities > 20,000 pcs. the layout is printed on large glass sheets with our automated printing machine, then cut, ground etc. Therefore, these larger quantities are available as ground edges 90° and 45°, depending on which type is preferred.

annual quantities: > 20,000 pcs. - ground edges 90° (45° available, too)

ltem no.	Туре
VG1131#FKC.01	PTFE paint - uncoated wells (hydrophilic)
VG1131#FKD.01	PTFE paint - Adhesive coated wells (silane)
VG1131#APF.01	PTFE paint - Advanced Adhesive coated wells



annual quantities: > 200,000 pcs. – ground edges 90° (45° available, too)

ltem no.	Туре
VG1131#FKC.01	PTFE paint - uncoated wells (hydrophilic)
VG1131#FKD.01	PTFE paint - Adhesive coated wells (silane)
VG1131#APF.01	PTFE paint - Advanced Adhesive coated wells

Diagnostic Slides are available in 5 different standard colors:

... = Layout no.

More than 100 different diagnostic slide layouts are available as standard products!

Custom-made Diagnostic Slides are available on request!

MOQ: 1,000 pieces. One-time costs for necessary layout, tooling and expenses will be invoiced separately.

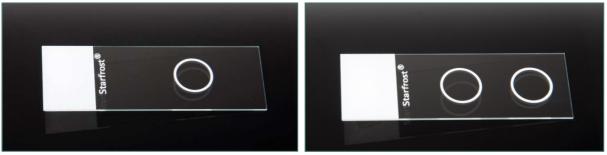


Standardized Diagnostic Slides

StarFrost® - CYTO Slides

Specific slides with 1 or 2 printed rings, standard color white, ground edges 90°, suitable for the use in centrifuges.

ltem no.	Туре
VG11371247FKB.01	1 ring, uncoated (hydrophylic)
VG11371248FKA.01	1 ring, adhesive (silan treated)
VG11371249FKB.01	2 rings, uncoated (hydrophylic)
VG11371250FKA.01	2 rings, adhesive (silan treated)



StarFrost[®] - CONTROL Slides

This slide has sections for both the patient sample and the control material. The two samples can be separated by the red line, which is printed on the reverse side to allow for reagent movement. StarFrost[®] CONTROL Slides are available with our different coatings, too.

ltem no.	Туре
VG11571221FKB.01	uncoated (hydrophylic)
VG11571221FKA.01	adhesive (silan treated)
VG11571221FKN.01	Advanced Adhesive

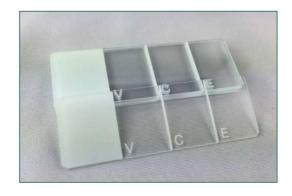




StarFrost[®] - VCE Slides

The VCE cytology slide can be used to separate vaginal, cervical and endocervical smears. The slide has three sections marked "V", "C" and "E" and a color-frosted end. 100% wettable (hydrophilic) glass surface.

ltem no.	Туре
VG11211035FKB.01	white, uncoated (hydrophylic)
VG11212035FKB.01	black, uncoated (hydrophylic)



StarFrost[®] - StarMark Slides

Our etchable StarMark slides have a double layer frosted end of different contrasting colors. Standard: white on top of black. Other combinations available on request. Available with wettable or coated glass surface.

ltem no.	Туре
VG1137Z111FKB.01	uncoated (hydrophylic)
VG1137Z107FKA.01	adhesive (silan treated)
VG1137Z107APN.01	Advanced Adhesive





Large Microscope Slides » 2" x 3" « (Mega Slides)

Approx. 51.5 x 75.5 x 1.0 mm, in accordance with ISO 8037/1, German made extra white low iron soda-lime float-glass, edges ground 90°, cleanly washed and polished, special packaging.

Item no.

VY11300051075.01

Matching Cover Glass

49 x 68 mm, thickness No.1 (0.13 – 0.17 mm) borosilicate glass of hydrolytic class 1, precise cutting, in accordance with ISO 8255/1, without cords and blisters, special packaging.

Item no.

VE104900680YA.02

Other dimensions available on request!

Microscope Slides with cavities

26 x 76 x approx. 1.0 - 1.2 mm, ground edges, with one or more cavities of approx. 15 - 16 mm diameter, appr. 0.2 - 0.4 mm deep, cleanly washed and polished, packed by 50 pieces in fibre free boxes and by 5,000 pieces in a stable shipping box

ltem no.	Туре
VV151	with 1 cavity
VV152	with 2 cavities
VV153	with 3 cavities





Cover Glass

Cover Glass - Standard sizes-

Thickness No. 1 (0.13 - 0.17 mm), borosilicate glass of hydrolytic class 1, precise cutting, in accordance with ISO 8255/1, without cords and blisters, packed by 100 pcs. in plastic boxes and by 1,000 pcs. in cardboard boxes.



ltem no.	Туре
VD11515Y1A.01	15 x 15 mm
VD11818Y1A.01	18 x 18 mm
VD12020Y1A.01	20 x 20 mm
VD12222Y1A.01	22 x 22 mm
VD12424Y1A.01	24 x 24 mm
VD11824Y1A.01	18 x 24 mm
VD12126Y1A.01	21 x 26 mm
VD12232Y1A.01	22 x 32 mm
VD12240Y1A.01	22 x 40 mm
VD12250Y1A.01	22 x 50 mm
VD12260Y1A.01	22 x 60 mm
VD12264Y1A.01	22 x 64 mm
VD12432Y1A.01	24 x 32 mm
VD12436Y1A.01	24 x 36 mm
VD12438Y1A.01	24 x 38 mm
VD12440Y1A.01	24 x 40 mm
VD12446Y1A.01	24 x 46 mm



ltem no.	Туре
VD12448Y1A.01	24 x 48 mm
VD12450Y1A.01	24 x 50 mm
VD12455Y1A.01	24 x 55 mm
VD12460Y1A.01	24 x 60 mm
VD12464Y1A.01	24 x 64 mm
VD12465Y1A.01	24 x 65 mm
VD12540Y1A.01	25 x 40 mm
VD12550Y1A.01	25 x 50 mm
VD12560Y1A.01	25 x 60 mm
	VD12448Y1A.01 VD12450Y1A.01 VD12455Y1A.01 VD12460Y1A.01 VD12464Y1A.01 VD12465Y1A.01 VD12540Y1A.01 VD12550Y1A.01

Other sizes are available custom-made! Other glass thicknesses available on request.





High-precision cover glass in Thickness 1.5H - for high-performance microscopes



These novel cover glasses are ideal for the use with high numerical aperture and high resolution objective lenses.

The uniform thickness and consistent optical properties are decisive for the image quality.

Thickness No. 1.5H (0,17 + - 0,005 mm), refractive index = 1,5255 +/- 0,0015, borosilicate glass of hydrolytic class 1, precise cutting, in accordance with ISO 8255/1, without cords and blisters, packed by 100 pcs. in plastic boxes and by 1,000 pcs. in cardboard boxes.

ltem no.	Туре
VD72450Y1A.01	24 x 50 mm
VD72460Y1A.01	24 x 60 mm

Further sizes available on request!



Cover glass for coverslipping machines

Automat – Star "green"/No. 1 1⁄2

Thickness No. 1 ½ (0.16 - 0.19 mm) borosilicate glass of hydrolytic class 1, precise cutting, in accordance with ISO 8255/1, without cords and blisters, packed by 100 pieces in plastic boxes and by 1,000 pieces in cardboard boxes.

Special treated surface to avoid sticking and for superior and faster separation of the slips.

ltem no.	Туре
VM52440Y1A.01	24 x 40 mm
VM52450Y1A.01	24 x 50 mm
VM52455Y1A.01	24 x 55 mm
VM52460Y1A.01	24 x 60 mm

Automat – Star "blue"/No. 1

Thickness No. 1 (0.13 - 0.17 mm) borosilicate glass of hydrolytic class 1, precise cutting, in accordance with ISO 8255/1, without cords and blisters, packed by 100 pieces in plastic boxes and by 1,000 pieces in cardboard boxes.

Special treated surface to avoid sticking and for superior and faster separation of the slips.

ltem no.	Туре
VM12440Y1A.01	24 x 40 mm
VM12450Y1A.01	24 x 50 mm
VM12455Y1A.01	24 x 55 mm
VM12460Y1A.01	24 x 60 mm



Cover glass circles

Thickness No. 1 (0.13 - 0.17 mm) borosilicate glass of hydrolytic class 1, precise cutting, in accordance with ISO 8255/1, without cords and blisters, packed by 100 pieces in plastic boxes and by 1,000 pieces in cardboard boxes.

ltem no.	Туре
VD100Y1A.01	05 - 10 mm
VD100Y1A.01	11 - 18 mm
VD100Y1A.01	19 - 22 mm
VD100Y1A.01	23 - 25 mm
VD100Y1A.01	26 - 30 mm
VD10031Y1A.01	- 31 mm
VD10032Y1A.01	- 32 mm
VD10033Y1A.01	- 33 mm
VD100Y1A.01	34 - 35 mm
VD100Y1A.01	36 - 40 mm
VD100Y1A.01	41 - 45 mm
VD100Y1A.01	46 - 50 mm

Other diameters and glass thicknesses available on request!



Haemacytometer - Cover Glass

Thickness approx. 0.4 mm, with or without ground surfaces, packed by 10 pieces in plastic boxes (5 x 2 pieces in cellophane bag) and by 100 pieces in cardboard boxes.



Quality A:

ltem no.	Size
VHA202641.01	20 x 26 mm
VHA222241.01	22 x 22 mm
VHA242441.01	24 x 24 mm

Prices for other sizes available on request!





Counting chambers

with various line-systems*

For cell-counting, including 2 pieces of haemacytometer-cover glass, with or without metal clamps, individually packed in plastic boxes, CE-marked.



CZ1 single CZ2 double CZ3 single bright-line CZ4 double bright line
CZ3 single bright-line
C74 double bright line
CZ4 double bright-line
CZ.BU. Bürker
CZ.BT. Bürker-Türk
CZ . FR . Fuchs-Rosenthal **
CZ.TH. Thoma
CZ . TN . Thoma neu
CZ.NE. Neubauer
CZ . NI . Neubauer improved
CZ . MA . Mallassez **
CZ0 without
CZ1 with

Туре

single chamber division

double chamber division

single chamber division / bright-line

double chamber division / bright-line

2 clamps per counting chamber

* = commodities, not of own production

** = Prices on request!

Other line-systems available on request!



Extras for Microscope Slides

special/additional packaging

Type of packaging

1,000-, 1,500- or 1,440-pieces (10 gross) carton

2,500-pieces stable shipping carton

tropical pouches for 1,500 pieces or for 1,440 pieces (10 gross)

tropical pouches for 2,500 pieces

tropical pouches for 5,000 pieces

2-pcs-box for 72 microscope slides

slides wrapped by 50 pcs. in cellophane



Customized OEM boxes

Possible for a minimum annual volume of 1,000,000 pcs.!

Different glass thicknesses

Thickness	
0,80 - 1,00 mm	
0.95 - 1,05 mm	STANDARD
1.00 - 1,20 mm	
1,20 - 1,50 mm	



Extras for Cover Glass

additional packaging

Type of packaging

Cardboard boxes wrapped in cellophane

Sealed in tropical pouches by 20,000/30,000/50,000/100,000 pcs. (depending on cover glass size)

Customized OEM boxes

Possible for a minimum annual volume of 1,000,000 pcs.!

Different glass thicknesses

Thickness

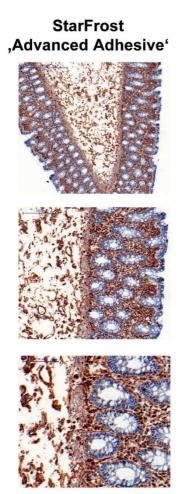
No. 0	(0.08 – 0.12 mm)		
No. 1	(0.13 – 0.17 mm)		STANDARD
No. 1 ½	(0.16 – 0.19 mm)		
No. 1.5H	(0,17 +/- 0,005 mm)	New to the range!	
No. 2	(0.19 – 0.23 mm)		
No. 3	(0.28 – 0.32 mm)		
No. 4	(0.38 – 0.42 mm)		
No. 5	(0.50 – 0.60 mm)		



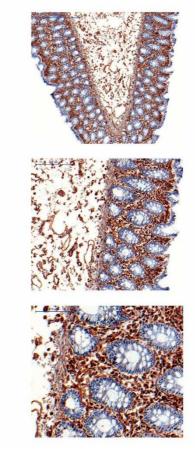
StarFrost® "Advanced Adhesive" vs. Superfrost Plus

Vimentin staining on Ventana Discovery XT

- IHC on colon mucosa
- •Comparison of StarFrost ,Advanced Adhesive' vs Superfrost-Plus



Superfrost Plus





The Different Types of Ground Edges

Knittel is one of only two manufacturers worldwide, who is able to provide all kinds of ground edges.





ISO 9001:2015 certificate

kiwa Number 10593 Issued on 25.07.2020 Valid from 01.08.2020 Page 1 of 1 31.07.2023 Valid until Kiwa International Cert GmbH certifies that the company Waldemar Knittel Glasbearbeitungs GmbH Varrentrappstr. 5 38114 Braunschweig for the scope Manufacturing and distribution of microscope-slides and coverslips for microscopy and analytic research has implemented and applies a Quality Management System, which is in compliance with the requirements of ISO 9001:2015 Kiwa International Cert GmbH Kiwa International Cert GmbH Technical Manage Managing Director Kiwa International Cert GmbH Grüner Deich 1 20097 Hamburg Germany Telefon +49 (0)40 30 39 49 60 Telefax +49 (0)40 30 39 49 79 DAkkS e-mail: info@kiwa.de Deutsche Akkreditierungsstelle D-ZM-16102-01-00 www.kiwa.de



ISO 13485:2016 certificate





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