

# Solutions for Thin Layer Chromatography **2023 CATALOGUE**









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A



## **Plate preparation**

## TLC carrier plate

The prerequisite for good separation is a quality backing layer. That's why Bionis backing plates are absolutely flat and have a perfectly uniform thickness. Our plates are made of 4 mm thick glass, with ground corners and edges.

Reference	Description
BS120.140	TLC carrier plates 200 x 200 mm, 1 pack of 10 pieces
BS120.142	TLC carrier plates 200 x 100 mm, 1 pack of 20 pieces
BS120.144	TLC carrier plates 200 x 50 mm, 1 pack of 20 pieces
BS120.420	TLC carrier plates 150 x 100 mm, 1 pack of 20 pieces
BS120.421	TLC carrier plates 100 x 50 mm, 1 pack of 20 pieces

## TLC & HPTLC Glass Plate-cutter

The scoring and cutting of glass TLC/HPTLC plates is a routine in many chromatography laboratories either to economise on plate usage or to cut the plate following separation for further derivatization.

The cutter consists of a high-quality carbide scriber mounted into a movable plastic head. It is designed for cutting glass-backed TLC/HPTLC plates up to 200 x 200 mm.



Reference	Description
BS121.200	TLC plate-cutter
BS178.501	Carbide scriber



## Spraying table

The spreading device for quick and low-cost production of analytical and preparative layers is proven by many satisfied users..

The device can be set to produce layer thicknesses ranging from 100 to 2000  $\mu$ m. The cost-effective spreading template permits simultaneous coating of 5 TLC plates with a format of 200 x 200 mm or 10 TLC plates of 200 x 100 mm.



The spreading table can be levelled and produces uniform layer thicknesses even if the working surface is not flat. Carrier plates can be found below.

Reference	Description
BS121.305C	Complete spreading device
BS120.315	Table for spreading device
BS120.305	Tank for spreading device

## Drying rack

This is a handy space-economizing light alloy rack for 10 TLC plates with the formats 200 x 200, 200 x 100 and 200 x 50 mm. After prewashing, the TLC plates are pushed into the horizontally standing drying rack. The TLC plates are dried in vertical orientation so that the moisture can easily escape upwards



The drying rack fits into standard desiccators to protect the plates against environmental influences.





Desiccator lids that have become stuck can be pulled off with this desiccator opener safely and without any need to exert force. The Dessicat'Op is suitable for all sizes of desiccators





## Sample application

## Manual sample application

## Micro-capillaries

These capillaries are intended for single use only. They automatically fill themselves right from one end to the other. Their accuracy is better than 1%.

A capillary holder is provided with each pack of these capillaries. This holder consists of the guide for the capillary and a small bulb with an opening which must be mounted on the capillary. Pressing on this bulb is an effective means for assisting filling and emtying of the capillary.



Reference	Description
BS120.192	Micro-capillaries 1 pack of 100 pieces, 1 capillary-holder 0,5 µl
BS120.193	Micro-capillaries 1 pack of 100 pieces, 1 capillary-holder 1 µl
BS120.194	Micro-capillaries 1 pack of 100 pieces, 1 capillary-holder 2 µl
BS120.195	Micro-capillaries 1 pack of 100 pieces, 1 capillary-holder 5 µl
BS120.196	Micro-capillaries 1 pack of 100 pieces, 1 capillary-holder 10µl



## Spotting Templates

Spotting/Application templates ensure exact positioning of the samples on the TLC/HPTLC plate

## **Application Templates**

These templates are available for TLC plates having the formats 50 x 50, 100 x 100, 200 x 100 and 200 x 200 mm.

The numbered triangular cut-outs at 5 mm intervals provide exact guidance for the pipette. This gives 9, 19 or 39 spotting positions, depending on the size of the template. The non-slip underside prevents unintentional displacement on the table

## Application and Evaluation Template

This template can be used with TLC plates up to 200 x 200 mm. It has 19 markings with 10 mm spacing. Holes are provided for marking the starting line and the standard separation distance of 100 mm. The good hand rest permits spotting, writing and line ruling with minimum effort required. The Rf-values can be read-off directly on the template.

The marked circular areas ranging from 3 to 200 mm2 permit immediate comparison of spot sizes without further aids.





Application Templates for the following formats of plates

a = for 200 x 200 mm b = for 200 x 100 mm c = for 100 x 100 mm d = for 50 x 50 mm

Application and Evaluation Template e = for 200 x 200 mm

Reference	Description
BS120.135	Application Template 50x50mm
BS120.134	Application Template 100x100mm
BS120.136	Application Template 200x100mm
BS120.137	Application Template 200x200mm
BS120.131	Application and Evaluation Templates 200x200mm



## Semi-Automatic Sample Application HPTLC-Applicator AS30

The HPTLC-Applicator AS30 is a decisive contribution towards modern GxP-conform thinlayer chromatography and works according to the spray-on-technique. A stream of gas carries the sample from the cannula tip onto the TLC/HPTLC plate. Therefore, compressed air is

needed. This proven principle prevents damage to the layer and allows the application tower to be moved during sample ejection. The samples can be applied on TLC plates, HPTLC plates or foils up to the size of 200 x 200 mm as dot or line.



...lbiostep

During the filling process, the dosing syringe is positioned over the tray which collects rinsing and flushing solvent and excess sample. The sample is injected into the body of the syringe through a lateral opening. After the syringe has been filled, a stepping motor moves the piston downwards to close the fill port. A second stepping motor moves the tower sideways across the plate. The microprocessor controls the two stepping motors and the gas valve.

All parameters for the application of up to 30 samples are entered via the keyboard. The user is guided through the clearly structured menu by the 2-line LCD display. After entering all parameters, the data will be checked for plausibility such as compliance of limit, clear assignment of lane or clear assignment of name. One method contains the plate size, number, length and distance of the path, the volume applied as well as the rate of application. The sample number and volume factor can be indicated for each path. The battery-buffered memory holds 10 different methods which can be loaded, edited and printed out at any time. The parameters can be set manually or via the software where you can easily manage your programs by loading the actual needed to the AS30 and deleting older ones. Due to the data pool at the PC, you have always the possibility of loading every program once saved.

An outstanding advantage is that the analysis software ProQuant of the HPTLC Densitometer CD60 can load the methods of the AS30 software resulting in much less effort for manual data input and reducing sources of errors.

The standard scope of supply contains 10/25  $\mu l$  syringes. For higher volumes, 100/250  $\mu l$  syringes can be provided.

NEW: Special cover with active exhaustion of the aerosols available - for more safety and a better atmosphere in the laboratory!

Reference	Description
BS130.500	HPTLC Applicator AS30 230 V * Including new software *
BS130.505	Protection coverAS30
BS130.525	IQ/OQ documents for HPTLC Applicator AS30
BS130.540	Compressor 230 V, max. 8 bars
BS130.550	Dosing syringe 10 µl for AS30
BS130.555	Filling syringe 25 µl for AS30
BS130.560	Dosing syringe 100 µl for AS30
BS130.565	Filling syringe 250 µl for AS30
BS130.580	Filtering cardboard 40 x 40 mm, 1 pack of 25 pieces
BS130.585	Activated carbon filter for protective cover, 1 pack of 5 pieces
BS130.590	Exhaust hose, viton with connector, 2.5 m

## **Fully Automatic Sample Application**

## Coupling AS30 and BS35

The autosampler BS35 was especially designed for the coupling with the HPTLC applicator AS30. The autosampler is completely controlled by the AS30. This is very convenient and operating mistakes are led to a minimum. Particularly, at a high sample thoughput, an autosampler is recommended. It allows the operator time to do other things.

Application and flushing is done autonomously due to the sample rack which holds up to 80 samples and a storage bottle with the appropriate washing solution. An acrylic glass rack enables the space-saving arrangement of the instruments whereas the autosampler is situated below the rack and AS30 above. A PTFE capillary feeds the sample solution to the AS30 on a very short way



#### **Technical Data**

Streak length: 0 - 100 mm in steps of 0.1 mm Weight: 12 kg Necessary air pressure: 2.5 - 10 bar Resolution: 2,000 steps Turret movement: 40 mm/s, 13 steps/mm

Dimensions (W x D x H): 500 x 380 x 180 mm Necessary air pressure: 2.5 - 10 bar



## Autosampler BS35

Our integrated autosampler BS35 serves for an easy, automated workflow which is great especially when having a high sample-throughput. Up to 80 vials can be inserted into the rack. It allows you the opportunity of using your time more efficiently! It is accurate, silent and offers reproducible, validable and reliable results. Below, please find 2 graphs showing the linear correlation (value of 0.99602).



#### ...lbiostep

#### **Technical Data**

Streak length: 0 - 100 mm in steps of 0.1 mm Resolution: 2,000 steps /µl Turret movement: 40 mm/s, 13 steps/mm Dimensions (W x D x H): 500 x 380 x 180 mm Weight: 12 Kgs Necessary air pressure: 2.5 - 10 bar

Reference	Description
BS130.510	Auto-sampler BS35 for AS 30, 230 V

BS130.535

#### Auto-sampler BS35 for AS 30, 230 V Rack for Autosampler (already included when buying AS30 and BS35 together)

## Separation

## Standard Separating Chamber with Glass Lid

The standard separating chamber is used for TLC plates up to format 200 x 200 mm.

There is a flat chamber floor with a small ridge in the middle so that less solvent is needed and the TLC plate can be placed comfortably. It is equipped with an even glass lid.

The standard separating chamber is available with a plain glass lid, or with a knob lid version.





Reference	Description
BS120.172	Standard separating chamber with knob lid for TLC plates 200 x 200 mm
BS120.173A	Standard separating chamber with glass lid forTLC plates 200 x 200 mm
BS120.174	Simultan separating chamber with glass lid for TLC plates 200 x 200 mm
BS120.175	Simultan separating chamber with knob lid for TLC plates 200 x 200 mm

## Nano-separating Chamber

Nano and HPTLC layers are being used to an increasing extent for quantitative TLC. The nano separating chamber was developed for the preferred plate format of 100 x 100 mm. It has a small ridge in the middle and comes with an even glass lid.

Bionis proposes the nano-chamber with a plain glass lid, or in a knob lid version.



Reference	Description
BS120.210 BS120.214 BS120.215	Nano-separating chamber with glass lid for TLC plates 100 x 100 mm Nano-separating chamber with knob lid for TLC plates 100 x 100 mm Nano-separating chamber with glass lid for TLC plates 200 x 100 mm
BS120.216	Nano-separating chamber with knob lid for TLC plates 200 x 100 mm

## Twin-through TLC chamber

Twin-through separation tanks are perfect for migration onall types of plates.

With their 2 compartments, they enable the TLC plate and saturation paper to be positioned without any risk of contact. Thanks to their small volume, they enable faster saturation of the atmosphere and therefore save on reactive products, which is respectful for the planet!

They can migrate TLC plates up to 200 x 200mm and are very robust.

Available model with plain glass lid and knob lid





Reference	Description
BS125.001	Double trough chamber with glass lid 100 x 100 mm
BS125.002	Double trough chamber with glass lid 200 x 100 mm
BS125.003	Double trough chamber with glass lid 200 x 200 mm

## Simultan TLC chambers

This chamber is commonly used for washing TLC plates before use and then for storing them in protected manner. This procedure is used in particular for quantitative trace analysis. The vertical grooves in the transverse walls will hold up to five plates of 200 x 200 mm. Specific features of this separating chamber are the plain ground flange edge and the flat chamber floor. The lid can be used as cover during prewashing.



Reference	Description
BS120.174	Simultan separating chamber with glass lid for TLC plates 200 x 200 mm
BS120.175	Simultan separating chamber with knob lid for TLC plates 200 x 200 mm
BS120.176	Simultan separating chamber with glass lid for TLC plates 200 x 100 mm
BS120.177	Simultan separating chamber with knob lid for TLC plates 200 x 100 mm

## Round Separating Chamber

These inexpensive cylindrical separating chambers with overhanging lid are available in two sizes. They are used for the plate formats of 200 x 100 and 200 x 50 mm. These separating chambers are very easy to use. Complete gas space saturation is easily and quickly achieved by putting a rolled-up piece of filter paper in the chamber. Only a very small quantity of flow medium is required, by virtue of the plain floor. Another advantage is their limited weight compared to the Standard chambers.





### Reference

BS120.170 BS120.171 Description

Round separating chamber 200x100mm with glass lid Round separating chamber 200x50mm with glass lid

## Horizontal Separating Chambers

The H-separating chamber exploits the advantages of the High Performance TLC layer (HPTLC) in optimum manner: small grain size of 5  $\mu$ m, improved packing and greater number of theoretical plates. This separating chamber is price-worthy and intended for the time and cost-saving HPTLC- plate format of 50 x 50 mm and the common format of 100 x 100 mm. Optimum separation is obtained on shortest possible runs.



The H-separating chamber permits good control of developing conditions, optionally with flow medium vapour saturated atmosphere or without pre-expose vapour.

Ambient atmospheric pollution with solvent vapours is minimized, even under congested working conditions. The chambers are made of solvent-resistant PTFE, precision milled to the required dimensions. It is closed with a 4 mm thick glass lid. An easily cleanable glass frit rod brings the flow medium to the layer.

Reference	Description
BS120.151	H-separating chamber 100 x 100 mm
BS120.150	H-separating chamber 50 x 50 mm
BS120.155	Frit rod, 50 mm, 1 pack of 5 pieces

## Derivatization

### Atomizers

#### Test tube atomizer

Glass spraying device for spraying very small reagent quantities. The atomizer insert is fitted in a 12 ml test tube with standard taper and secured with springs.





#### Special atomizer

glass spraying device with rubber ball for producing reagent mists. When using this atomizer, the spray reagent comes into contact only with glass. The atomizer insert is fitted in a conical flask with ground joint and secured with clips. The capacity of the flask is 100 ml. If requested, the provided rubber ball can be replaced by other compressed air sources.

BS123.990 BS124.000

#### Description

Test tube atomizer, 12 ml Special atomizer, 100 ml, with rubber ball

### Pressure sprayer TLC Comp-Air

Sprayer for CCM reagents with pressure reserve for spraying CCM or other reagents with perfect quality (fineness, distribution and regularity of particles)

Kit comprising: Apparatus + 113 ml pressure reserve + 125 ml bottle + capsule



### Reference

BS124.010 BS124.011 BS124.012 Description

Compressed air sprayer TLC Comp-Air 113ml Tank for TLC Comp-Air sprayer - pack of 10 pieces 125ml Pressure cartridge for TLC Comp-Air sprayer

### Derivapress

The TLC/HPTLC immersion derivatization system is available in 2 sizes:

for 100 x 100 mm and 200 x 200 mm plates. It is easy-to-use, just like opening and closing a book.





Take advantage of the following points:

- homogeneous and clear derivatization of all TLC/HPTLC plates
- complete treatment in 3 seconds
- clean and safe working environment, no dangerous dischares or leaks

The transfer pads are meant for taking reagent solution. They can be used several times, depending on reagent use. One pad is 3 mm thick.

Reference	Description
DC07-T0010	Derivapress® Compact 100x100 mm (size: 220x190x35 mm)
DC07-T0020	Derivapress® Compact 200x200 mm (size: 290x250x35 mm)
DC08-T0010	Derivamouss® Transfer Pads 100 x 100 mm, 1 pack of 100 pieces
DC08-T0115	DDerivamouss® Transfer Pads 200 x 200 mm, 1 pack of 100 pieces

## Dipping Chamber

The dipping chamber is an alternative to spraying for avoiding environmental pollution. These chambers fulfil the established requirement: rapid and uniform implementation of a precise detection reaction. Special advantages of the dipping method are the improved uniformity of reagent distribution and the quick, reliable operation. The reagent is brought onto the plate – not into the air! All familiar spray reagents can also be used for dipping.



The chambers are made of high-inert glass. They have a clear width of only 5 mm. This allows manual immersion without difficulties and requires only small volumes of reagent: 100 ml for plate format of 200 x 200, 50 ml for 200 x 100 and 25 ml for 100 x 100 mm. A rack made of polypropylene enables safe holding during dipping as well as easy storage. It is intended for 1 to 2 chambers of any size.

Reference	Description
BS124.160	Dipping chamber 100x100mm
BS124.161	Dipping chamber 200x100mm
BS124.162	Dipping chamber200x200mm
B\$124.210	PP rack for 2 dipping chambers



Spraying without CFC - an alternative for the environmental conscious laboratory

The Sprayer SGe1 works with a built in, quietly operating, high performance pump. Independent of mains, ultrafine spray mist is generated. Liquids with viscosities up to those of light oils are atomized simply by pressing a button. The droplet diameter is 5 - 10 µm. The closable container for the spray reagents is made of borosilicate glass and can hold 50 ml. It is srewed into the spray head which is made of highquality PTFE and can be replaced within seconds. The handy and modern form of the Sprayer SGe1 was designed under ergonomical aspects.



Reference	Description
BS130.605	Sprayer SGe1, 230 V, incl. accumulator and charging unit
BS130.610	Reagent reservoir, 50 ml, 1 pack of 10 pieces
BS130.613	Opaque reagent reservoir, 50 ml, 1 pack of 3 pieces

## Spray Box

The spray box serves as protective device when spraying TLC/ HPTLC plates with aggressive solutions.

A built-in low noise ventilator leads the spray mist via the pipe connector on the rear into a fume cupboard. The pipe adapter of the ventilator leads upwards. It can be connected to standard installation tube NW 110. This converts the spray box into a small exhaust cupboard on the bench. The air feed is 400 m3/h. Any reagent runoff is collected into a separate trough. The spray box is made of acidresistent PVC and can hold plates up to 200 x 200 mm.

If requested, a special, chemically-inert tube is also available. Length: 2 meters.

## **Technical Data**

Air feed: Dimensions (W x H x D): Pipe adapter: Weight:

400 m<sup>3</sup>/h air 620 x 580 x 610 mm NW 110 7 kg



## Thin Layer Chromatography

### Reference

BS124.105 BS124.110 Spray box with ventilator, 230 V Tubing pour enceinte de pulvérisation

Description

## Plaque chauffante Thermoplate S+

The Thermoplate S plus is an electronically controlled hotplate for detection reactions in TLC/HPTLC and for precise heating and drying operations in the laboratory.

The set nominal temperature is held constantly within 2K. The operating range is between 25 and 200 °C. The lowest possible controlled temperature is 10 K above ambient temperature. The unit operates with a platinum resistance thermometer.



Temperature readout is made on a coloured touchscreen which changes from green or blue to red at increasing temperatures. This means the user can visually see if it is safe to touch the plate or not. An accustic signal informs the user as soon as a defined time or requested temperature is reached. Furthermore, up to 9 programs can be saved. The heating surface is made of high conductivity aluminium that – together with the ultralarge area of the heating element – ensures a uniform temperature distribution.

#### Great features

Changing colours from green to red at increasing temperatures Timer function with acustic signal Program control with saving up to 9 programs

#### **Technical Data**

Temperature range: Heating area: Heating rate (at 50 °C): Fluctuation range of temperature: Power supply: Dimensions (L x W x D): Weight: 25 - 200 °C 240 x 240 mm 10 K/min 2 K 100 - 240 V, 50 - 60 Hz, 500 W 447 x 240 x 105 mm 6.5 kg

Reference	Description
BS121.845	Thermoplate S+, 230V



## Derivatizer Chromajet DS20

LThe ChromaJet DS20 presents a completely new derivatization concept. Reagents are sprayed on thinlayer plates or foils with the highest precision under microprocessor or computer control. The distinction from manual spraying lies in the great reduction in the quantity of

reagent required, the almost complete absence of aerosol formation and the evenness of the spray pattern. It is possible to create and store up to 4 spray methods specifically adapted to individual chromatography schemes



and call them up as required. The integrated software works under Windows 10. The individual working steps of the spraying procedure, including date and running number, are stored with the spray method. That permits operation in conformity with GxP for the first time in the field of documentation, as a result of the exact reproducibility and documentation.

The spray methods define all important parameters, such as spray rate, volume to be sprayed and reagent selected. The free selection of X-Y coordinate direction means that it is possible to spray evenly, either individual tracks or areas of any size up to 200 x 200 mm.

The integrated reagent changer selects from 4 possible reservoirs of the desired spray medium depending on the spray program. An integrated rinsing process stops any carry-over. The transparent protective cover permits close inspection during the spray process and prevents the escape of aerosols. Excess spray mists are evacuated continuously and lead, for instance, into a fume cupboard, via an optional exhaust hose. The spray protocol includes all individual parameters of the spray program and is issued completely with date, time, user name, a plate designation assigned to the chromatogram and any comments that might have been entered.

#### **Technical Data**

Derivatisation area: Power supply: Dimensions (W x H x D): Weight: 200 x 200 mm 100 - 240 V, 50 - 60 Hz, 500 W 470 x 400 x 225 mm 15 kg

Reference	Description
BS130.700	DerivatizerChromajet DS20 – 230V
BS130.732	Exhaust hose, viton with connector, 2.50 m



## Documentation

## HP-Uvis NxG

The new HP-UVIS NxG combines four UV-lamps for 254/310/345/366 nm in one unit! Two inclined plate tables with non-slip surface are positioned one above the other. Incident stray light is minimized by the cabinet which is closed on 3 sides so that an observation is possible without the need of a darkroom. Due to the use of a high pressure mercury vapour discharge lamp, the HP-UVIS NxG provides a very high radiation intensity at 366 nm for fluorescence evaluation of thin-layer chromatograms.



In this respect, it is superior to all analyzing lamps with cold light tubes. Fluorescent substances can still be detected in nanogram quantities. One 8 W low pressure tube together with a selected filter guarantee an optimum contrast at 254 nm. The new HP-UVIS NxG is equipped with a UV protection shield.

#### **Technical Data**

Detection area: 200 x 200 mm Dimensions (W x H x D): 325 x 480 x 290 mm Weight: 11.5 kg 1x UV tube 254 nm 2x UV LED 310 nm 1x UV LED 345 nm 1x UV LED 366 nm

## Reference Description BS147.001 New HP-UVIS NxG 230 V



### Providoc documentation system DD80

the Providoc DD80 is the new documentation system on the Biostep range.

The DD80's new multi-wavelength technology ensures that users can find the best possible configuration (with even the option of combining several wavelengths), so that even the most unobtrusive spots are revealed.

With its Argus X2 GLP-compliant software, TLC plate captures can be optimised, processed, annotated, compared, stored and used as images or in the form of reports.



The UV Tubes and LEDs are arranged symmetrically in the DD 70 2.0 for different light sources and guarantee the homogeneous illumination. When the drawer is opened, there is an automatic UV cutoff for safety reasons.

A special white light LED is fitted in the base for transmitting light applications. It is now possible to examine individual wavelength ranges.

You can choose between 310 nm, 345 nm and 366 nm, or use all three wavelengths together for your test.

The spectrum of the original fluorescent tube can be reproduced using LED technology (all 3 wavelengths active). This allows you to work according to laboratory requirements and subsequently detect the wavelength more accurately.

#### **Technical Parameters**

200 x 200 mm
400 x 500 x 440 mm
4x UV LED 310 nm
2x UV LED 366 nm
1x white LED transmission

Reference	Description
BS147.003	New ProViDoc <sup>®</sup> DD 80, incl. Logiciel Argus X2 <sup>®</sup>
BS140.085	Salycilate test plate for ProViDoc® DD 80
BS140.066	IQ/OQ for ProViDoc <sup>®</sup> DD 80, including validation plate
BS140.068	IQ/OQ for ProViDoc <sup>®</sup> DD 80 CFR21 version, including validation plate
BS140.095	CFR21 part 11 module pour ProViDoc <sup>®</sup> DD 80 ( only for server installation )



## **Qualification / Quantification**

## Densitometric Scanner CD60

The HPTLC Densitometer CD60 includes the know-how of more than 20 years experience and the current state of the art. A PC serves as interface between the user and the CD60 and controls all functions of the densitometer. It is equipped for absorbency and fluorescence measurements in reflectance and transmittance on objects with dimensions up to 265 x 200 x 4 mm.



Three light sources are provided:

a deuterium lamp (190 - 340 nm), a halogen lamp (340 - 900 nm) as well as a mercury lamp. The usable spectral range extends from 190 to 900 nm whereby the monochromator, the lamps and the filters are automatically switched over. The size of the scanning light beam can also be adjusted by the PC. Slit widths from 0.4 to 10 mm and slit heights from 20  $\mu$ m to 2 mm are possible.

There are many application possibilities in conjunction with the software ProQuant. This extraordinary software operating under Windows 10 is also easy to use by those without computer experience, so that its use can be learned in very short time.

Process chromatograms and compile result and peak lists in a simple, reliable manner that conforms with GxP! You rapidly acquire reproducible results and data of real evidential worth

#### **Recording modes**

- Remission and transmission
- Extinction or fluorescence
- Two-wavelength measurement
- Multi-wavelength measurement

#### **Technical Data**

Dimensions (W x H x D): 300 x 730 x 550 mm Weight: 30 kg Filters: 370, 420, 450, 550, Orange, UV

Max. scan length: 5 mm to 195 mm Max. scan width: 5 mm to 260 mm Spectral range: 190 - 900 nm

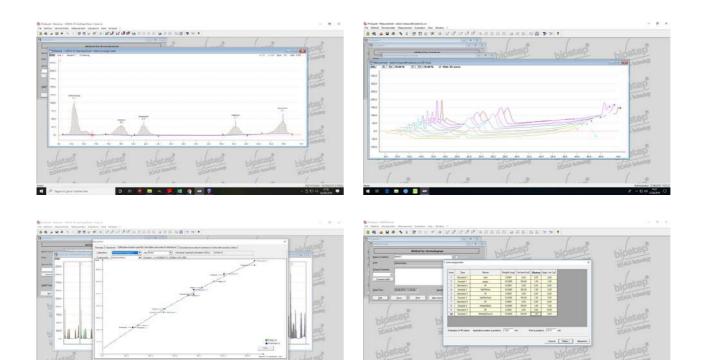


#### Provalid® - Software for Automatic Validation

The scanner validation program provides an automatic check on and if necessary re-adjustment of the mechanical, optical and electronic systems of the densitometer. The following points are individually checked.

- $\cdot$  The accuracy of the wavelength adjustment of the monochromator
- Tests on the slit module
- The positioning of the plate table
- The condition and adjustment of the electronic system
- · The condition and adjustment of the lamps and lamp mirror

The results are evaluated, printed and stored.



Reference	Description
BS131.800	Densitometer CD 60 HPTLC, 230 V, Transmission/Remission
BS131.816	Provalid® software, Program for automatic validation
BS131.830	Spectral Calc <sup>®</sup> software, Program for compilation of spectral libraries
BS131.825	IQ/OQ for HPTLC Densitometer CD60
BS63.418	Validation plate for CD60



## **TLC/HPTLC Plates**

## Standard unmodified silica on glass plate

Si-60 glass TLC plates, specific surface area (BET) ~ 500m<sup>2</sup>/g, average pore size 60 Angström, specific pore volume 0.75 mL/g, particle size 5-8  $\mu$ m, standard quality, with or without UV254 fluorescence indicator,

PH stability: 6.2 - 6.8

#### Avantages :

- optimal wettability for clear, accurate colour results, including with even with 100% aqueous reagents

- efficient separation and excellent batch-to-batch reproducibility



Reference	Material	Dimensions	UV	Thickness	Qty
FBSG-2580	Glass plate	25x80mm		0,2-0,25mm	320 pieces
FBSG-25100	Glass plate	25x100mm		0,2-0,25mm	320 pieces
FBSG-50100	Glass plate	50x100mm		0,2-0,25mm	160 pieces
FBSG-100100	Glass plate	100x100mm		0,2-0,25mm	80 pieces
FBSG-50200	Glass plate	50x200mm		0,2-0,25mm	80 pieces
FBSG-100200	Glass plate	100x200mm		0,2-0,25mm	40 pieces
FBSG-200200	Glass plate	200x200mm		0,2-0,25mm	20 pieces
FBSG-2580F	Glass plate	25x80mm	Х	0,2-0,25mm	320 pieces
FBSG-25100F	Glass plate	25x100mm	Х	0,2-0,25mm	320 pieces
FBSG-50100F	Glass plate	50x100mm	Х	0,2-0,25mm	160 pieces
FBSG-100100F	Glass plate	100x100mm	Х	0,2-0,25mm	80 pieces
FBSG-50200F	Glass plate	50x200mm	Х	0,2-0,25mm	80 pieces
FBSG-100200F	Glass plate	100x200mm	Х	0,2-0,25mm	40 pieces
FBSG-200200F	Glass plate	200x200mm	Х	0,2-0,25mm	20 pieces
FBPRP-200200F	Glass plate	200x200mm	Х	0,5mm (Prep)	20 pieces



## BIONIS aluminium TLC sheet, silica gel, SIL 60

Aluminium plates coated with a high-purity silica phase for analytical ccm measurements. For use in pharmaceuticals, cosmetics, chemicals, bio-chemicals, environmental safety, plants, forensics, R&D, etc. Available with or without UV254nm developer.

#### Technical specifications :

Normal phase Layer thickness: 0.15-0.2mm Particle size: 5 - 8µm PH stability: 6.2 - 6.8 Pore size: 60 A



Reference	Material	Dimensions	UV 254nm	Thickness	Qty
FBTLC-AL-2575-F	Aluminium	25x75mm	Х	0,15-0,20mm	160 pieces
FBTLC-AL-50100-F	Aluminium	50x100mm	Х	0,15-0,20mm	80 pieces
FBTLC-AL-50200-F	Aluminium	50x200mm	Х	0,15-0,20mm	40 pieces
FBTLC-AL-100100-F	Aluminium	100x100mm	Х	0,15-0,20mm	40 pieces
FBTLC-AL-100150-F	Aluminium	100x150mm	Х	0,15-0,20mm	20 pieces
FBTLC-AL-100200-F	Aluminium	100x200mm	Х	0,15-0,20mm	20 pieces
FBTLC-AL-200200-F	Aluminium	200x200mm	Х	0,15-0,20mm	20 pieces
FBTLC-AL-2575	Aluminium	25x75mm		0,15-0,20mm	160 pieces
FBTLC-AL-50100	Aluminium	50x100mm		0,15-0,20mm	80 pieces
FBTLC-AL-50200	Aluminium	50x200mm		0,15-0,20mm	40 pieces
FBTLC-AL-100100	Aluminium	100x100mm		0,15-0,20mm	40 pieces
FBTLC-AL-100150	Aluminium	100x150mm		0,15-0,20mm	20 pieces
FBTLC-AL-100200	Aluminium	100x200mm		0,15-0,20mm	20pieces
FBTLC-AL-200200	Aluminium	200x200mm		0,15-0,20mm	20 pieces







26

# Thin Layer Chromatography

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Analytical Technocrats Since 1992

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biostep is a registred brand of bionis

Me



#### SEMI-AUTOMATIC HPTLC MODULAR APPLICATOR



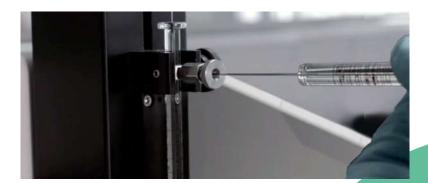




Spray-on technique: high accuracy and perfectly reproductible sample deposits Dual syringe system: dosing and filling syringe Low sample requirement Application of dots or lines Protective cover prevents external contamination Circuit rinsing before each application Stand-alone or PC-controlled Easy-to-use software, transferring data to Densitometer CD60 Holding up to 10 methods Volume spotted on the HPTLC plate: from 0.1µl to 1 ml Can be easily upgraded to fully automatic

The AS30 semi-automatic HPTLC sample applicator, which works according to the spray technique, allows the deposition of substances in lines or dots on HPTLC plates or sheets up to 200 x 200mm, in a fully parameterisable way, thanks to compressed air flow without contacting the plates. The parameters of 10 methods can be programmed and saved with the integrated software. The sample application is carried out automatically, only filling and inserting the syringe is made manually. A dosing syringe is fixed at a movable turret. Therefore, removing and new adjusting of this syringe for every application is not necessary.

The AS30 semi-automatic HPTLC applicator is scalable. It can be upgraded to a fully automatic version by simply connecting it to the BS35 auto-sampler









## A530



#### TECHNICAL SPECIFICATIONS

Up to 200 x 200 mm
0 - 100 mm in steps of 0.1 mm
3 - 120 s/μL
2000 steps/μL
40 mm/s, 13 steps/mm
2.5 - 10 bar
500 x 380 x 180 mm
12 kg

#### REFERENCES FOR ORDER

Reference	Description
BS130.500	AS 30, HPTLC-semi-automatic applicator, 230 V, 10 $\mu$ l/25 $\mu$ l syringes, incl. Cover, Exhaust hose and Software
BS130.500.1	AS 30, HPTLC-semi-automatic applicator, 230 V, 100 μl/250 μl syringes, incl. Cover, Exhaust hose and Software
BS130.501	AS 30, HPTLC-semi-automatic applicator, 110 V, 10 µl/25 µl syringes, incl. Cover, Exhaust hose and Software
BS130.501.1	AS 30, HPTLC-semi-automatic applicator, 110 V, 100 µl/250 µl syringes, incl. Cover, Exhaust hose and software
BS130.540	Air Compressor, 230 V, extremely silent
BS130.541	Air Compressor, 110 V, extremely silent
BS130.525	Documents: IQ/OQ for semi-automatic applicator AS30
BS130.580	Filter cardboard 40 x 40, 1 pack of 25 pieces
BS130.550	Dosing syringe 10µl for AS30
BS130.555	Filliing syringe 25µl for AS30
BS130.560	Dosing syringe 100µl for AS30
BS130.565	Filling syringe 250µl for AS30
BS130.585	Activated carbon filter for AS30 protection cover, 1 pack of 5 pieces

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## THE FUTURE IN HPTLC



## ChromaDoc 2.0 HPTLC Documentation System

(USP, Ph.Eur. recommended)



Application



Development



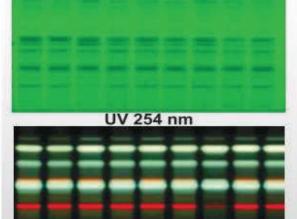




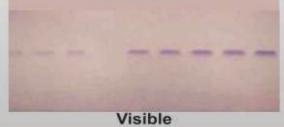
Derivatization

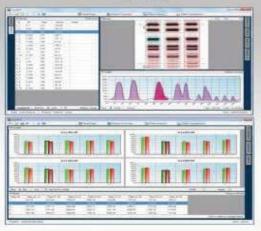


100 Marine



UV 366 nm





#### Automatic HPTLC Software

Perform Qualitative & Quantitative analysis on TLC plates in minutes.

ASPIRE

- Automatically detect and truly compare chromatograms in three dimensions.
- Automatic Spot quantification
- Automatic Band quantification
- Compare data from spots and plates.
- Group and average plates for increased statistical reliability.
- Display graphs and store TLC plates in projects.
- Export data into Excel or other third party software for further custom analysis.
- Plate comparison , Cross comparison, Image Enhancement
- Print graphs, plates and data sheets.
- Compliance with USP 203
  - IQ-OQ, In-built FDA 21 CFR Part 11 & Electronic signature

## www.aspirescientific.in

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Analytical Technocrats Since 1992 An ISO 9001:2015 Company



#### FULLY-AUTOMATED HPTLC SAMPLE APPLICATOR





Spray-on technique: high accuracy and perfectly reproductible sample deposits Fully automated sample application Analysis of up to 80 samples Automatic cleaning of the system Validatable and reliable Minimum operating mistakes Small footprint Very Silent System Incl. software for controlling AS30/BS35 and transferring data to CD60 Densitometer For any TLC/HPTLC plates up to 200 x 200 mm



The association of the BS35 auto-sampler with the AS30 HPTLC applicator offers a set of fully automated sample depositions on TLC plates.

The 2 devices are arranged on and under an acrylic glass rack forming a space-saving unit. A PTFE capillary ensures the connection between the AS30 and the BS35 over a very short distance.

With the HPTLC-Applicator AS30, samples are sprayed onto TLC/HPTLC plates with compressed air flow without contacting the plates. The sample application is carried out automatically, only filling up to 80 vials, the Autosampler BS35 is doing the rest. This is remarkable and time-saving especially when having a high sample-throughput.

The benefit of the spray-on technique for quantitative analysis is the possibility of applying different volumes of same calibration standard instead of equal volumes of different standard concentrations. Even if samples are dissolved in polar solvents such as water, compact and narrow bands are formed.

The special cover with active exhaustion of the aerosols offers for more safety and a clean working atmosphere in the laboratory.

The fully automated HPTLC applicator FAS305 includes 1xAS30, 1xBS35, 1xcover, 1x exhaust hose and 1x acrylic rack.











#### FULLY-AUTOMATED HPTLC SAMPLE APPLICATOR

#### TECHNICAL SPECIFICATIONS

#### Applicator AS30

Plate size: Path length: Application rate: Resolution: Turret movement: Necessary air pressure: Dimensions (W x D x H): Weight: Up to 200 x 200 mm 0 - 100 mm in steps of 0.1 mm 3 - 120 s/µL 2000 steps/µL 40 mm/s, 13 steps/mm 2.5 - 10 bar 500 x 380 x 180 mm 12 kg

#### Aethodenparameter einstellen Name : linearitätstest 060819 Benutzer Benutzer : pia Datum : 01.08.2019 geometrische Einstellungen sonstige Einstellungen ZahiderBahnen : |1 ... 30] 🛛 📑 🖌 8 🕂 🗸 COM1 (frei) Zahi der Standards : [1 ... 8] COM Part : 1 🕂 🗹 ZehiderPtoben : [0....1] 10 µl Dosierspritze : -Statposition (mm): | 6 ... 138) 12 📩 🖌 090 Volumen [µ]: [0.2 ... 10] Abstand [mm]: | 0 ... 10] 7 🕂 🗸 3 🕂 🗹 Zyklenzahl: [ 1 ... 4] 11 🔆 🗸 Strichlänge (mm): | 0 ... 3) 🛛 🔁 📈 Zeit [s/µl] : [ 3 ... 120] Plattenbreite [mm]: 100 Pausenzeit [s]: [ 0 .... 15] 50 🖌 • Auftragebereich (mm): 69 Abbrechen DK Mindextplattenbreite [mm] : 100

#### Autosampler BS35

Rack For 80 samples of 1.5 mL Septum piercing By dual needle design Dimensions (W x D x H) 478 x 310 x 210 mm Weight 14 kg

#### **REFERENCES FOR ORDER**

Reference	Description
BS130.530-1	FAS305, HPTLC fully-automatic applicator, 230 V, 10 μl/25 μl syringes, incl. Cover, Exhaust hose, acrylic rack and Software
BS130.530-2	FAS305, HPTLC fully-automatic applicator, 230 V, 100 μl/250 μl syringes, incl. Cover, Exhaust hose, acrylic rack and Software
BS130.530-3	FAS305, HPTLC fully-automatic applicator, 110 V, 10 μl/25 μl syringes, incl. Cover, Exhaust hose, acrylic rack and Software
BS130.530-4	FAS305, HPTLC fully-automatic applicator, 110 V, 100 μl/250 μl syringes, incl. Cover, Exhaust hose, acrylic rack and software
BS130.540	Air Compressor, 230 V, extremely silent
BS130.541	Air Compressor, 110 V, extremely silent
BS130.525	Documents: IQ/OQ for semi-automatic applicator AS30
BS130.580	Filter cardboard 40 x 40, 1 pack of 25 pieces
BS130.585	Activated carbon filter for AS30 protection cover, 1 pack of 5 pieces

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White (LED), UV light at 254 nm (tube), 310 nm (LED), 345 nm (LED) and 366 nm (LED) Low energy consumption thanks to LED lamps Light intensity adjustment With UV safety switch Pull-out drawer for easy positioning of your samples High-resolution digital camera USB-C Connection Acquisition and documentation software argusX2 incl. database Integrated user management GLP-conform image acquisition with date and time Extensive image processing possibilities 21 CFR Part 11 compliant including a complete system audit trail by additional module



The ProViDoc DD80 is a high-performance documentation system with brilliant recording quality. The workstation consists of a dark hood with different light sources, a camera for taking high-resolution images, a documentation top for guaranteeing the optimal distance between camera and sample as well as a software for controlling the system and saving the recorded images.

The UV Tubes and LEDs are arranged symmetrically in the Providoc DD 80 for different light sources and guarantee the homogeneous illumination. When the drawer is opened, there is an automatic UV cutoff for safety reasons.

A special white light LED is fitted in the base for transmitting light applications. It is now possible to examine individual wavelength ranges.

You can choose between 310 nm, 345 nm and 366 nm, or use all three wavelengths together for your test.

The spectrum of the original fluorescent tube can be reproduced using LED technology (all 3 wavelengths active). This allows you to work according to laboratory requirements and subsequently detect the wavelength more accurately.







#### OPERATION

#### Illumination

Large illumination compartment 390 x 385 x 280mm (W x D x H) Provides overhead illumination of TLC/HPTLC plates with 2 x 254 nm 8 watts UV Lamps, 4x UV LED 310 nm, 2x UV LED 345 nm, 2x UV LED 366 nm, 4x white LED Allows to illuminate from below (transparency) the tlc plates thanks to 1x white LED, for transmission analysis

#### Observation

The transparent support of the base, covered with an acrylic sheet, makes it possible to observe TLC plates up to 200 x 200mm.

UV circuit breaker when opening the cabinet (user protection). Switch to keep the lamps on for certain jobs (Preparative Thin Layer Chromatography).

#### **Capture head**

Upper module consisting of a camera support plate, which acts as an interface and completely protects the system from stray light.

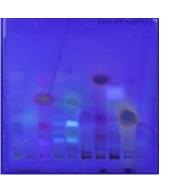
Special high-quality optical glass filter for UV work, which can be mounted on the filter holder if required. Filter for stable colour reproduction and high resolution.

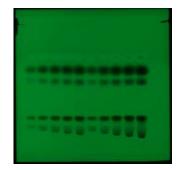
#### **Digital camera**

System comprising a high-resolution digital SLR camera with a high-performance lens, motorised zoom and autofocus. Its high light sensitivity means it can record weak fluorescence. Automatic zoom, Resolution: 18Mpixels, 22.3mm x 14.9mm CMOS sensor











#### SOFTWARE ARGUS X2

Special dedicated software for saving, processing and archiving images taken by the ProViDoc DD80 camera, ArgusX2 makes it possible to qualitatively manage images and:

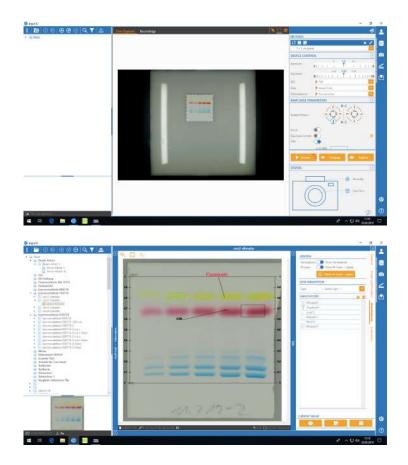
- -Enlarge them
- -Change format

-Change colors, shine, sharpness, etc... to reach the best adjustment in order to make it possible to visualize all the tasks, even the weakest ones

- Compare several adjustments
- -Add comments, shapes, scales and Rf indices
- -Add date
- -Classify them in files saved by passwords,
- -Compare them, superimpose them, etc.
- -Edit reports for each of the programmed methods

Each image is automatically saved with the date, user name and unique identification number. It can therefore be stored according to GLP guidelines and can even be password protected if desired.

Also available, as an option, version compliant with CFR 21 part. 11







#### LED TECHNOLOGY HPTLC DOCUMENTATION SYSTEM

#### TECHNICAL SPECIFICATIONS

#### **Providoc DD80**

PROVIDOC

DD80

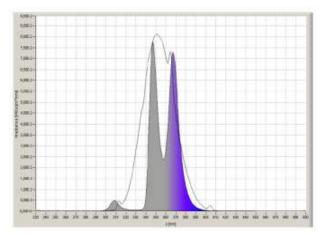
 detection area:
 200 x 200 mm

 dimensions (W x H x D):
 400 x 500 x 440 mm

 Weight:
 11.3 kg

#### Light sources:

2x UV tube 254 nm 4x UV LED 310 nm 2x UV LED 345 nm 2x UV LED 366 nm 4x white LED 1x white LED transmission **Camera:** Digital mirror reflex camera Resolution of 24 MPixels Light sensitive lens F 2.8



#### **REFERENCES FOR ORDER**

Reference	Description
BS147.003	HPTLC documentation system PROVIDOC DD80 - 230V
BS147.004	HPTLC documentation system PROVIDOC DD80 - 110V
BS150.030	Module 21 CFR Part 11
BS140.066	Documents: IQ/OQ for PROVIDOC DD80
BS140.085	Validation plate for documentation system

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#### HPTLC SCANNING DENSITOMETER





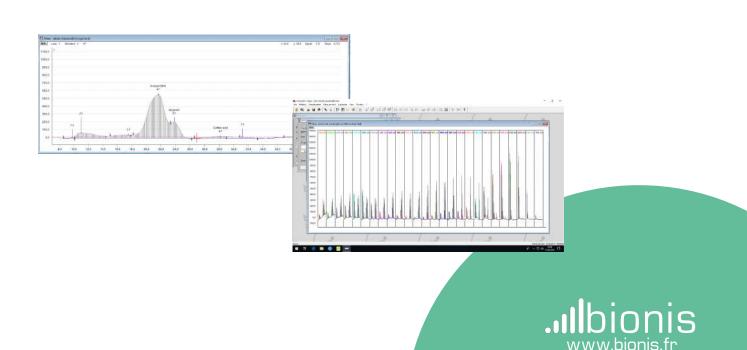
Absorbance or fluorescence measurement Remission or transmission mode For objects up to 265 x 200 x 4 mm Automatic starting and switching of filters and lamps Rapid data collection and evaluation Recording spectra from 190 - 900 nm Automatic background noise correction Software-controlled by ProQuant Ease of operation Reproducible and reliable results



For quantitative determination of samples, the HPTLC-Densitometer CD60 converts the spots/bands of the single substances into a chromatogram curve. It measures the absorbance or fluorescence of separated compounds in transmission or reflection mode. The HPTLC-Densitometer CD60 is controlled by ProQuant software which also enables quantitative evaluation of the generated data.

The HPTLC-Densitometer CD60 works within a spectral range of 190 - 900 nm. This is provided by three light sources: a deuterium lamp (190 to 340 nm), a halogen lamp (340 to 900 nm) as well as a mercury lamp. Once the wavelength is selected, the densitometer will automatically start to scan the entire plate. It measures the absorbance or fluorescence reflected or transmitted by each sample.

This will be stored in the software in the form of peak tables. These tables consist of Rf values and area of each spot. Therefore, you can carry forward the quantitative evaluation of the generated densitometric data by ProQuant software









#### HPTLC SCANNING DENSITOMETER

**Recording Modes** 

Remission and transmission

Absorbance or fluorescence

Two-wavelength measurement

Multi-wavelength measurement

Linear and Meander scan

#### MEASUREMENT AND EVALUATION

#### **Method Types**

Method for chromatogram Method for multi-wavelength scan Method for spectrum

#### Results

Peak lists Results for sample and standard Automatic integration with manual correction facility Linear, polynomial or Michaelis-Menten function

#### TECHNICAL SPECIFICATIONS

Object size Up to 265 x 200 x 4 mm Spectral range 190 - 900 nm Filters 370, 420, 450, 550, orange, UV Max. scan length 5 to 195 mm Max. scan width 5 to 260 mm Slit width 0.4 to 10 mm Slit height 0.02 to 2 mm Dimensions (W x H x D) 730 x 550 x 300 mm Weight 30 kg



#### REFERENCES FOR ORDER

Reference	Description
BS131.800	HPTLC-Densitometer CD60, 230 V, incl. interface box, software ProQuant
BS131.801	HPTLC-Densitometer CD60, 110 V, incl. interface box, software ProQuant
BS131.816	Software Provalid, program for automatic validation
BS131.830	Software Spectra Calc, program for compilation of spectra libraries
BS131.825	IQ/OQ documents for HPTLC-Densitometer CD60

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#### MULTI-REAGENTS HPTLC DERIVATIZER





Ensures perfect Repeatability and Accuracy for your TLC analyzes

Spraying on Precise Zones pre-defined by the operator

Perfect regularity of the shape of the jet Almost total absence of Aerosol formation

Spray up to 4 reagents on one plate

Significantly reduces reagent consumption

Suitable for all common reagents

Automatic rinsing system

Stand-alone or PC-controlled, intuitive operation

User Protection and Security

Meeting the requirements of GMP/GLP

For any TLC/HPTLC plates up to 200 x 200 mm



The ChromaJet DS20 is a microprocessor-controlled sprayer for transferring the derivatization reagents onto TLC/HPTLC plates.

The advantages over manual spraying are a significantly reduced reagent quantity, a very uniform spray pattern and the avoidance of aerosol formation.

The application of the reagents is carried out with highest precision and is reproducible at any time. This device, allowing TLC operations to be carried out in accordance with GLP prescriptions, protects the health of the user against any chemical risk (inhalations and splashes)

The ChromaJet DS20 can operate stand-alone or connected to a PC.

With a special software, different spraying methods can be created, saved and loaded.



Rack for reagents bottles







CHROMAJET

**DS20** 



#### MULTI-REAGENTS HPTLC DERIVATIZER

#### TECHNICAL SPECIFICATIONS

Derivatization area 200 x 200 mm Jet speed 50 - 200 mm/s Spray cycle 1 – 5 Spray grid 2 - 4 mm in 0.1 mm steps Air throughput 70 - 100 % Reagent throughput 50 - 240 s/mL Filling rate, rinsing rate 6 - 30 s/mL Rinsing operation 1 – 5 Dimensions (W x H x D) 440 x 405 x 275 mm Weight 15 kg



Spraying Nozzle

#### REFERENCES FOR ORDER

Reference	Description
BS130.700	ChromaJet DS20, reagent spraying device, 230 V, incl. 1 pack of 50 tubes 40 mL, software
BS130.701	ChromaJet DS20, reagent spraying device, 110 V, incl. 1 pack of 50 tubes 40 mL, software
BS130.720	Filter, 1 pack of 20 pcs.
BS130.725	IQ/OQ documents for ChromaJet DS20
BS.63796	Tubes with flat base, screw cap, 40 mL, 1 pack of 50 pcs.
BS130.732	Exhaust hose, viton with connector, 2.50 m

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#### SPECIAL DEVICES FOR SELF-PRODUCTION OF TLC PLATES





For the fast and inexpensive production of analytical and preparative layers For layer thicknesses of 100 – 2000 μm For TLC plates up to 200x200mm

The TLC plate preparer allows the controlled and uniform application of uniform application of an adsorbent mixture to glass plates.

This makes it possible to produce TLC plates in a simple and economical way The device consists of 2 modules:

- Adjustable tank
- Preparation table

The adsorbent to be spread is placed in the application tank, the thickness of the layer is adjusted by means of a notched wheel adjustable between 100 and 2000µm.

The TLC plate preparer can accommodate 5 plates  $200 \times 200$  mm , 10 plates  $100 \times 100$  mm or  $100 \times 200$  mm and 20 plates  $100 \times 100$  mm.

The tank is then moved by the hand handle in the direction of application on the surface of the glass plate to obtain a uniform layer.

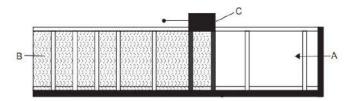
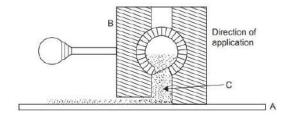


Figure 28.1 (a) Operation of thin layer spreader (b) Aligning Tray with Glass-slide Partially Coated.

#### REFERENCES FOR ORDER

BS120.305C: Complete TLC plate preparer BS120.315: TLC spreading table BS120.305: Adjustable tank



#### TECHNICAL SPECIFICATIONS

Material: Chrome plated brass Tank volume: approx. 140ml Flow rate: 400 m3/h Dimensions: 1135 mm x 220 mm x 65 mm Net Weight: 7,9 kg

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### DESICCATOR OPENER



#### No stucking desiccator lids anymore!

Ever since desiccators have been in use in laboratories, stuck lids have created a source of annoyance, particularly with flanges specially treated to offer a



Now be happy with your new desiccator opener DESSICAT'OP©!

It simplifies this every day task and removes a troublesome business.

•Simply place the stainless steel loop around the lid tubulure and place the rubber ferrule below the desiccator rim.

•Place the retaining pin at the other end of the steel cable into one of the holes which are provided on the rectangular shank of the lever. The several holes assure the efficiency of the opener irrespectively of the desiccator size.

•Finally, whilst applying some pressure to the lid with the left hand, lever the handle downward from its oblique position. In this manner, the lid will slide away from the base.



#### TECHNICAL SPECIFICATIONS

Material: Brass shaft - Stainless Steel wire - Rubber handle. Dimensions except SS wire : 420 x 30 x 30mm Weight : 0,450 Kg

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#### MULTI-WAVELENGTH HPTLC VISUALIZER



HP-UVIS NXG Reference: BS147.001

UV light at 254nm (tube), 310 nm (LED), 345 nm (LED) and 366 nm (LED) Low energy consumption thanks to LED lamps Includes UV safety switch Preparative TLC mode 2 inclined plate tables with non-slip surface, positioned one above the other, equipped with UV-protection shield 3-sided closed case For TLC/HPTLC plates up to 200 x 200 mm



It is now possible to examine individual wavelength ranges.

You can choose between 310 nm, 345 nm and 366 nm, or use all three wavelengths together for your test.

The spectrum of the original fluorescent tube can be reproduced using LED technology (all 3 wavelengths active). This allows you to work according to laboratory requirements and subsequently detect the wavelength more accurately.

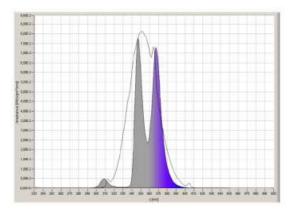
There is now also a safe preparative mode where you can open the protective screen to 45° and take marks and samples with protective equipment.

If the protective screen is opened more than 45°, the lights switch off immediately.

#### TECHNICAL SPECIFICATIONS

Detection area: Dimensions (W x H x D): Weight: 1x UV tube 254 nm 2x UV LED 310 nm 1x UV LED 345 nm 1x UV LED 366 nm

200 x 200 mm 325 x 480 x 290 mm 11.5 kg



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#### ELECTRIC SPRAYING SYSTEM FOR TLC PLATES





Extremely fine spray mist Fine atomisation at the touch of a button For liquids up to the viscosity of light oils 50 ml sealable container for spray reagent made of clear glass ( brown glass available ) With batteries and quick-charge station for permanent use, perfect as a storage container



The SGe1 works with an integrated, silent and efficient pump.

An ultra-fine spray mist is generated with a volume that is independent of the load of the device. Liquids with viscosities up to light oils are simply atomised at the push of a button. The droplet diameter is 5 to 10  $\mu$ m.

The standard container for the spray reagents is made of borosilicate glass and holds 50 ml. It is screwed into the PTFE spray head and can be replaced in seconds. The containers are also available in an opaque version.

Removal and cleaning of the spray nozzle is very simple using the tool supplied with the device. The practical and modern design of the SGe1 sprayer was developed with ergonomic principles in mind.



#### TECHNICAL SPECIFICATIONS

Material: PVC Material spraying nozzle: high quality PTFE Dimensions: 220x100x210mm Weight: 0,850 Kg Weight with charging stand : 1,800 Kg Power supply : 230V/12V - 50Hz Recharging time : approx. 1h

Perfect to be used with the Biostep Spray Box

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HEATER

PRECISE HPTLC PLATE



#### THERMOPLATE S+ Reference: BS121.845

Accuracy and uniform distribution of the heat over the entire surface of the plate Temperature range from 25 to 200°C Colour indication of the touch screen for security of the users Acoustic signal at the end of the heating procedure Possibility to store up to 9 programs



The Thermoplate S+ is an electronically controlled heating plate for detection reactions in TLC/ HPTLC and for precise heating and drying operations in the laboratory.

The set nominal temperature is maintained at all times to within 2°C. The operating range is from 25 to 200°C.

The lowest possible controlled temperature is 10°C above the ambient temperature.

The unit is operated with a platinum resistance thermometer.

The temperature is read on a coloured touch screen which changes from green or blue to red as the temperature rises. This means that the user can visually see whether it is safe to touch the plate or not.

An acoustic signal informs the user as soon as a set time or temperature is reached. In addition, up to 9 programmes can be stored.

The heating surface is made of highly conductive aluminium which, together with the extra large surface of the heating element, ensures an even temperature distribution.



#### TECHNICAL SPECIFICATIONS

Temperature range: 25 - 200°C Heating surface: 240 x 240 mm Heating range (at 50°C): 10°C/min Controlled temperature fluctuation: 2°C Power: 100 - 240 V, 50 - 60 Hz, 500 W Dimensions (D x H x W): 340 x 245 x 110 mm Weight: 4.6 kg

Security for warm status of the hot plate

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#### GLASS TLC/HPTLC PLATES CUTTER





High-quality carbide scriber Available for glass TLC/HPTLC plates up to 200x200mm Graduated ruler for precision cutting Very easy replacement of the carbide scriber Avoids to buy costy pre-cut plates Cost-saving by using only the TLC plate size



The scoring and cutting of glass TLC/HPTLC plates is a routine in many chromatography laboratories either to economise on plate usage or to cut the plate following separation for further derivatization.

The plate cutter consists of a high-quality carbide tip mounted in a movable carbide tip, mounted in a movable plastic holder.

The plate is placed on the aluminium plate.

A graduated ruler allows precise cutting to the desired desired dimensions.

It is designed for cutting TLC / HPTLC glass plates up to 200 x 200 mm.

The carbide tip can be replaced very easily.

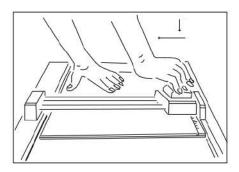
Insert the glass plate into the holder with the absorbent side down.

Place the cutting head in the starting position and slide the assembly along the glass plate. Remove the plate and separate the two parts manually.

#### TECHNICAL SPECIFICATIONS

Material: Aluminium tray - Carbide tip mounted on PP support. Dimensions : 220 x 250 x 50mm Weight : 0,650 Kg





Replacement carbide scriber BS178.501

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