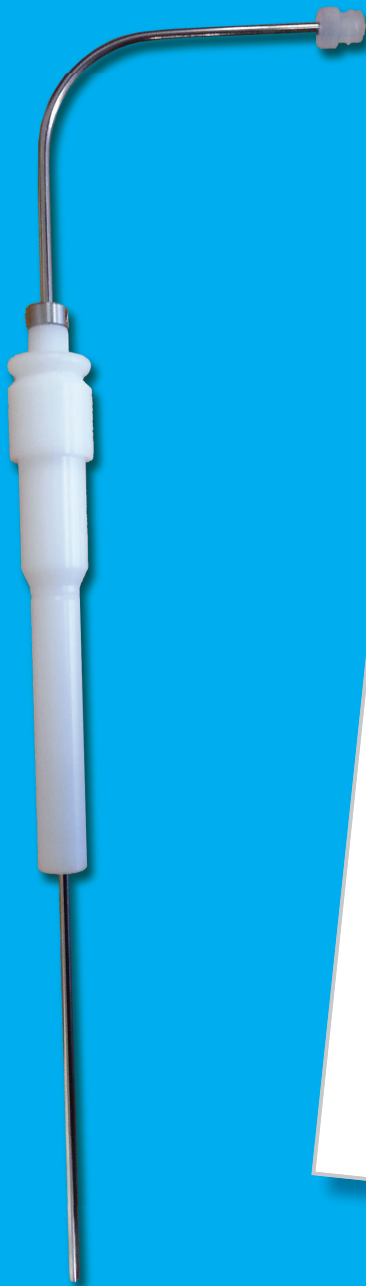


CALIBRATED DISSOLUTION CANNULAS

The only calibrated dissolution cannulas on the market.

Calibrated dissolution cannulas available for all dissolution manufacturers instruments

Our cannula design improves the sampling integrity for manual and online sampling methods.



Lab Unlimited
CARL STUART GROUP

Cannula Depth Calibration Certificate
Certificate Number: {}

EQUIPMENT/ COMPANY DETAILS
Company: Date:
Engineer:

Calibration Gauge Model Volume 500
Calibration Gauge Model Volume 750/1000

Test Equipment Used:
Depth Gauge: ID: _____

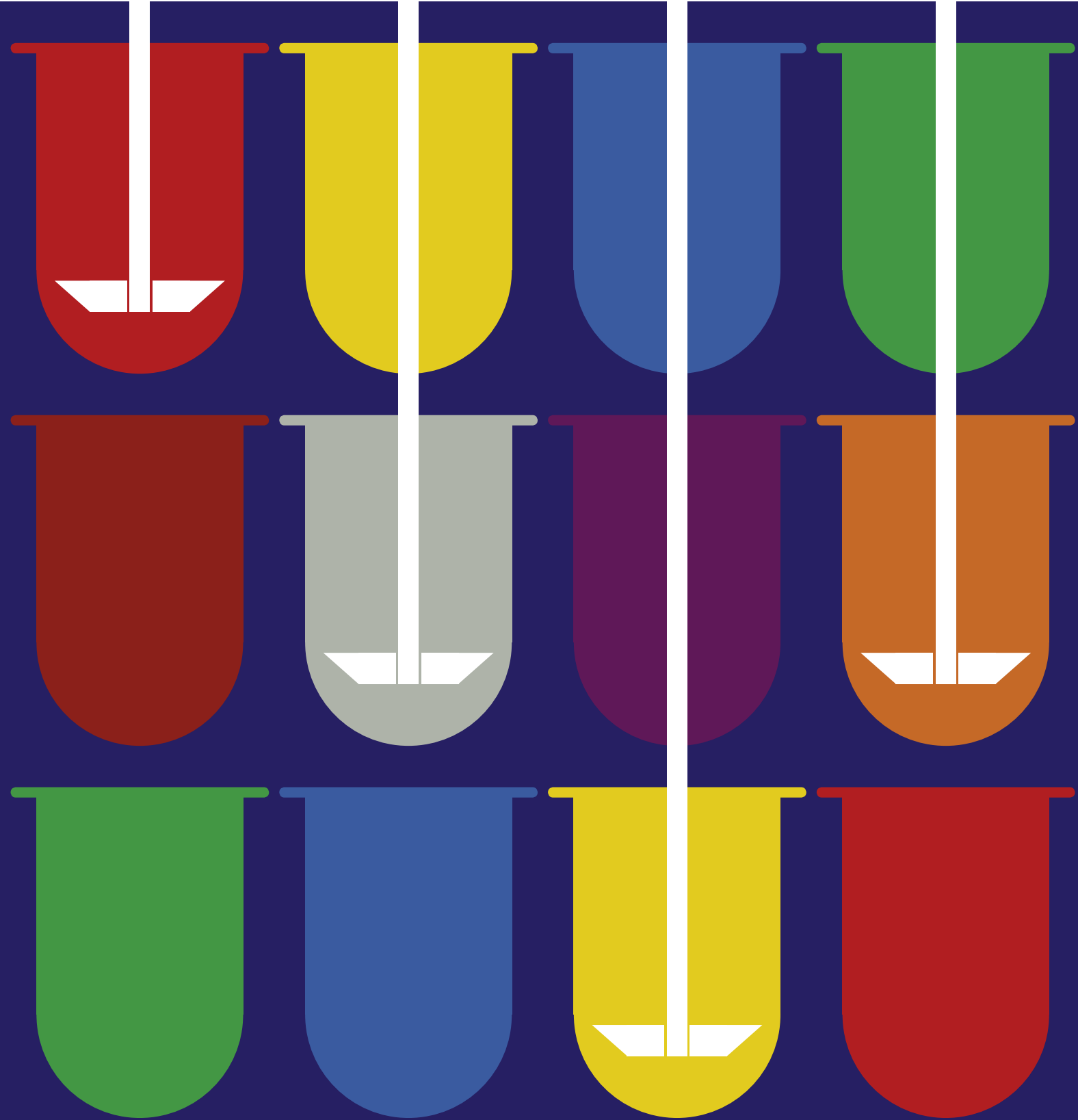
Certificate Number: _____

Measurements:

Gauge Type	Required Sample Tube Set Point in mm	Measured Sample Tube Set Point in mm

NOTES/COMMENTS:

For more information
email: cannulas@labunlimited.co.uk
or visit www.labunlimited.co.uk/dissolution-cannulas



Distributed by:

Lab Unlimited
CARL STUART GROUP

Tallaght Business Park
Whitestown, Dublin 24,
Ireland
D24 RFK3

Tel: (01) 4523432
Fax: (01) 4523967
E-mail: info@labunlimited.com
Web: www.labunlimited.com

Quatro House, Frimley Road,
Camberley,
United Kingdom
GU16 7ER

Tel: 08452 30 40 30
Fax: 08452 30 50 30
E-mail: info@labunlimited.co.uk
Web: www.labunlimited.co.uk



FILTERS



The Filter



Almost every dissolution test relies on samples being taken to produce a result. Filters are used to prevent particles of tablet from getting into the sample and affecting the spectrophotometer or HPLC results.

Filters should be shown not to adsorb any compounds of interest.

All filters are U.S. Pharmacopeia compliant where applicable and meet machine manufacturer specifications

Key Considerations



Most manufacturers use a filter on the end of the sampling cannula. These **cannula filters** are made of UHMW Polyethylene for larger porosities or Poroplast for lower porosities (1-5µm) and are completely inert to most compounds.

With filters, **porosities** are nominal and represent an average pore size rather than an absolute pore size. Thus a 35µm and 40µm filter will perform in much the same way.

If in-line filters are used it is important that a small amount of media is **pushed back** in the reverse direction to wash particles off the filter back into the vessel. Particles are part of the tablet and as such should be kept inside the vessel dissolving with the rest of the tablet.

Failure to do this results in the particles staying on the filter. The effect of this is not only to remove the particles from the media but next time a sample is taken, the media is pulled through the particles stuck to the filter which can give erroneously high readings.

When selecting a filter, it is wise to conduct some tests to ensure that there is no **sample absorption** onto the filter. If this is a problem then alternative filters and materials are available but external filtration may be required.



Cannula Filters
(see all manufacturers, pages 23-25)



Cannula Filters, VanKel Style
(see VanKel, page 25)



Filter Discs
(see Distek, page 23)



Filter Tips
(see VanKel, page 25)

Types of filter:

Cannula Filters

Cannula Filters generally have a large surface area and may affect the hydrodynamics in the vessel. However they have a good flow rate and may be used when high levels of particulates are present to prevent particulates blocking the sample probes. A large porosity range is available. Different manufacturers recommend different filters for use with their sample probes and not all are interchangeable because of differences in probe diameter.

Filter Discs

Some low volume sample probes require an In-Line Filter Disc (or filter frit) which has a lower surface area than a cannula filter. These are designed to keep the filtration process outside the vessel but may suffer from blocking due to the lower surface area.

This problem can be solved with the Hi-Cap cannula which uses standard cannula filters outside the vessel. See page 30.

Filter Tips

Filter Tips are smaller than cannula filters and fit on the end of larger diameter sample probes.

For EXPERT ADVICE on obtaining the correct filter for your cannula email sales@labhut.com



Caleva Compatible Cannula Filters

Caleva tablet dissolution baths normally use cannula style filters with a large range of porosities.

Part No.	Description	Quantity	OEM Ref
FIL001-CA-100 FIL001-CA-1000	1µm Cannula Filters, Poroplast	100 Pack 1000 Case	0810100 0810101
FIL004-CA-100 FIL004-CA-1000	4µm Cannula Filters, Poroplast	100 Pack 1000 Case	0810103 0810104
FIL010-CA-100 FIL010-CA-1000	10µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	0810106 0810107
FIL035-CA-100 FIL035-CA-1000	35µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	0810142 0810143
FIL040-CA-100 FIL040-CA-1000	40µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	0810097 0810098
FIL070-CA-100 FIL070-CA-1000	70µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	- -



Caleva Cannula Filter

Distek Compatible Filter Discs and Cannula Filters

Distek tablet dissolution baths utilise a **narrow sample probe** that incorporates a **small filter disc** at the top. As these small filters can become blocked, an **external filter at the end of the sample probe** may be used instead of, or in addition to the filter disc.

Part No.	Description	Quantity	OEM Ref
FIL010-DK	10µm Filter Discs, UHMW Polyethylene	1000 Case	5720-0203
FIL045-DK	45µm Filter Discs, UHMW Polyethylene	1000 Case	5720-0275
FIL070-DK	70µm Filter Discs, UHMW Polyethylene	1000 Case	-
FIL090-DK	90µm Filter Discs, UHMW Polyethylene	1000 Case	-
FIL10S-DK-100 FIL10S-DK-1000	10µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack 1000 Case	5720-0500 5720-0501
FIL20S-DK-100 FIL20S-DK-1000	20µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack 1000 Case	- -
FIL35S-DK-100 FIL35S-DK-1000	35µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack 1000 Case	5720-0220-100 5720-0220-1000
FIL45S-DK-100 FIL45S-DK-1000	45µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack 1000 Case	5720-0020-100 5720-0020-1000
FIL70S-DK-100 FIL70S-DK-1000	70µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack 1000 Case	5720-0502 5720-0503



Distek Filter Disc



Distek Cannula Filter

Erweka Compatible Cannula Filters

Erweka tablet dissolution baths normally use cannula style filters with a large range of porosities.

Part No.	Description	Quantity	OEM Ref
FIL001-EW-100 FIL001-EW-1000	1µm Cannula Filters, Poroplast	100 Pack 1000 Case	90-000-0013 90-000-0013
FIL004-EW-100 FIL004-EW-1000	4µm Cannula Filters, Poroplast	100 Pack 1000 Case	90-000-0023 90-000-0023
FIL010-EW-100 FIL010-EW-1000	10µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	90-000-0033 90-000-0033
FIL020-EW-100 FIL020-EW-1000	20µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	- -
FIL035-EW-100 FIL035-EW-1000	35µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	- -
FIL040-EW-100 FIL040-EW-1000	40µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	- -
FIL070-EW-100 FIL070-EW-1000	70µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	- -



Erweka Cannula Filter



FILTERS



Hanson Compatible Cannula Filters

Hanson Research dissolution baths normally use cannula style filters. The Hanson/Waters Dissolution/HPLC Interface uses a narrow bore (1/16" ID) filter instead of the normal cannula diameter. Both types are supplied, as listed below.

Part No.	Description	Quantity	OEM Ref
FIL001-HR-100 FIL001-HR-1000	1µm Cannula Filters, Poroplast	100 Pack 1000 Case	27-101-087 27-101-097
FIL004-HR-100 FIL004-HR-1000	4µm Cannula Filters, Poroplast	100 Pack 1000 Case	27-101-088 27-101-098
FIL010-HR-100 FIL010-HR-1000	10µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	27-101-074 27-101-091
FIL020-HR-100 FIL020-HR-1000	20µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	- -
FIL035-HR-100 FIL035-HR-1000	35µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	27-101-085 27-101-095
FIL045-HR-100 FIL045-HR-1000	45µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	27-101-089 -
FIL070-HR-100 FIL070-HR-1000	70µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	27-101-082 27-101-092
FIL10S-HR-100 FIL10S-HR-1000	10µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack 1000 Case	27-101-083 27-101-093
FIL35S-HR-100 FIL35S-HR-1000	35µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack 1000 Case	27-101-086 27-101-096
FIL45S-HR-100 FIL45S-HR-1000	45µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack 1000 Case	27-101-090 -
FIL70S-HR-100 FIL70S-HR-1000	70µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack 1000 Case	27-101-084 27-101-094



FIL010-HR-100/1000



FIL070-HR-100/1000



FIL10S-HR-100/1000

Cannula Filter Colour Coding

Cannula filters are colour coded for easy identification of porosity.



Pharmatest Compatible Cannula Filters

Pharmatest dissolution baths normally use cannula style filters.

Part No.	Description	Quantity	OEM Ref
FIL001-PT-100 FIL001-PT-1000	1µm Cannula Filters, Poroplast	100 Pack 1000 Case	- -
FIL004-PT-100 FIL004-PT-1000	4µm Cannula Filters, Poroplast	100 Pack 1000 Case	- -
FIL005-PT-100 FIL005-PT-1000	5µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	31-63511-50 -
FIL010-PT-100 FIL010-PT-1000	10µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	- -
FIL035-PT-100 FIL035-PT-1000	35µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	- 31-63211-50
FIL070-PT-100 FIL070-PT-1000	70µm Cannula Filters, UHMW Polyethylene	100 Pack 1000 Case	- -



Pharmatest Cannula Filter



Sotax Compatible Cannula Filters

Sotax dissolution baths use a closed design. For manual and automatic sampling it is necessary to mount the sampling cannula through the drive head of the bath. This allows the use of cannula filters.

Part No.	Description	Quantity	OEM Ref
FIL010-SX-100	10µm Cannula Filters, UHMW Polyethylene	100 Pack	-
FIL010-SX-1000		1000 Case	-
FIL035-SX-100	35µm Cannula Filters, UHMW Polyethylene	100 Pack	-
FIL035-SX-1000		1000 Case	-
FIL070-SX-100	70µm Cannula Filters, UHMW Polyethylene	100 Pack	-
FIL070-SX-1000		1000 Case	-



Sotax Cannula Filter

VanKel Compatible Cannula Filters and Filter Tips

VanKel baths normally use either cannula style filters or filter tips. The filter tips fit on the end of larger diameter sample probes.

Part No.	Description	Quantity	OEM Ref
FIL010-01-100	10µm Cannula Filters, UHMW Polyethylene	100 Pack	17-4000
FIL010-01-1000		1000 Case	17-4000
FIL010-VK-100	10µm Direct Fit Cannula Filters (no Tygon tubing needed), UHMW Polyethylene	100 Pack	-
FIL010-VK-1000		1000 Case	-
FIL020-01-100	20µm Cannula Filters, UHMW Polyethylene	100 Pack	-
FIL020-01-1000		1000 Case	-
FIL035-01-100	35µm Cannula Filters, UHMW Polyethylene	100 Pack	17-4010
FIL035-01-1000		1000 Case	17-4010
FIL035-VK-100	35µm Direct Fit Cannula Filters (no Tygon tubing needed), UHMW Polyethylene	100 Pack	-
FIL035-VK-1000		1000 Case	-
FIL045-01-100	45µm Cannula Filters, UHMW Polyethylene	100 Pack	-
FIL045-01-1000		1000 Case	-
FIL070-01-100	70µm Cannula Filters, UHMW Polyethylene	100 Pack	17-4020
FIL070-01-1000		1000 Case	17-4020
FIL070-VK-100	70µm Direct Fit Cannula Filters (no Tygon tubing needed), UHMW Polyethylene	100 Pack	-
FIL070-VK-1000		1000 Case	-

FILTIP-02	2µm Filter Tips	1000 Case	17-4100
FILTIP-05	5µm Filter Tips	1000 Case	17-4110
FILTIP-10	10µm Filter Tips	1000 Case	17-4120
FILTIP-20	20µm Filter Tips	1000 Case	17-4130
FILTIP-45	45µm Filter Tips	1000 Case	17-4140



VanKel Filter Tip



FIL010-01-100/1000



FIL020-01-100/1000



FIL035-01-100/1000



FIL070-01-100/1000

Tygon Tubing Troubles? Go for a Direct Fit!

The VanKel series of Direct Fit Cannula Filters have been designed to fit directly onto the end of the standard VanKel (Varian) style manual and automated cannula. No Tygon tubing needed!