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Tablet Dissolution Accessories

in association with

QLA
QUALITY LAB ACCESSORIES

ISSUE 2



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Tablet Dissolution Accessories

LabHut.com is an international supplier of chromatography and dissolution products with over a decade's experience of supplying quality dissolution products to the international market. We can supply dissolution products for all OEMs and custom dissolution parts for most applications.

More than just a product catalogue...

Information

Technical information such as USP guidelines, descriptions and diagrams of USP Apparatus

Key Considerations

Important information and advice, such as correct use of products, materials information and product variations/alternatives.

Care & Maintenance

Cleaning, handling and storage guidelines.

Basket Shafts

The Basket Shaft Apparatus 1
The basket shaft is a shaft connected to the cylindrical basket. See page 4 for more details. All shafts are constructed from type 316 electropolished stainless steel.

The Key Considerations
(316 or 316L)
Spring Style - The standard dissolution basket is designed to attach to the basket shaft using spring clips. Over time these clips can become bent or corroded which can lead to excessive wear of the basket or the shaft.
O-Ring - The O-ring basket fits to the shaft using an O-ring instead of a spring. It is not as rigid as the spring style but it is easier to use. The USP sets specific requirements for the O-ring and its material. See page 11 for more details.
All basket shafts are laser marked with a unique serial number for easy identification.

Erweka Compatible Basket Shafts

Part No.	Description	OEM ref.
850500-15	15" Basket Shaft, 316L	-
850500-19	19" Basket Shaft, 316L	-

Hanson Compatible Basket Shafts

Part No.	Description	OEM ref.
830017-16	16" 400mm Spring Clip Basket Shaft	43-237-009

Distek Compatible Basket Shafts

Part No.	Description	OEM ref.
850500-15	15" 400mm Spring Clip Basket Shaft	2021-0074
850500-19	19" 400mm Spring Clip Basket Shaft	2021-0075
850500-24	24" 400mm Spring Clip Basket Shaft	2021-0076
850500-28	28" 400mm Spring Clip Basket Shaft	2021-0077
850500-32	32" 400mm Spring Clip Basket Shaft	2021-0078
850500-36	36" 400mm Spring Clip Basket Shaft	2021-0079
850500-40	40" 400mm Spring Clip Basket Shaft	2021-0080
850500-44	44" 400mm Spring Clip Basket Shaft	2021-0081
850500-48	48" 400mm Spring Clip Basket Shaft	2021-0082
850500-52	52" 400mm Spring Clip Basket Shaft	2021-0083
850500-56	56" 400mm Spring Clip Basket Shaft	2021-0084
850500-60	60" 400mm Spring Clip Basket Shaft	2021-0085
850500-64	64" 400mm Spring Clip Basket Shaft	2021-0086
850500-68	68" 400mm Spring Clip Basket Shaft	2021-0087
850500-72	72" 400mm Spring Clip Basket Shaft	2021-0088
850500-76	76" 400mm Spring Clip Basket Shaft	2021-0089
850500-80	80" 400mm Spring Clip Basket Shaft	2021-0090
850500-84	84" 400mm Spring Clip Basket Shaft	2021-0091
850500-88	88" 400mm Spring Clip Basket Shaft	2021-0092
850500-92	92" 400mm Spring Clip Basket Shaft	2021-0093
850500-96	96" 400mm Spring Clip Basket Shaft	2021-0094
850500-100	100" 400mm Spring Clip Basket Shaft	2021-0095

VanKel Compatible Basket Shafts

Part No.	Description	OEM ref.
850500-15	15" 400mm Spring Clip Basket Shaft	12-2001
850500-19	19" 400mm Spring Clip Basket Shaft	12-2002
850500-24	24" 400mm Spring Clip Basket Shaft	12-2003
850500-28	28" 400mm Spring Clip Basket Shaft	12-2004
850500-32	32" 400mm Spring Clip Basket Shaft	12-2005
850500-36	36" 400mm Spring Clip Basket Shaft	12-2006
850500-40	40" 400mm Spring Clip Basket Shaft	12-2007
850500-44	44" 400mm Spring Clip Basket Shaft	12-2008
850500-48	48" 400mm Spring Clip Basket Shaft	12-2009
850500-52	52" 400mm Spring Clip Basket Shaft	12-2010
850500-56	56" 400mm Spring Clip Basket Shaft	12-2011
850500-60	60" 400mm Spring Clip Basket Shaft	12-2012
850500-64	64" 400mm Spring Clip Basket Shaft	12-2013
850500-68	68" 400mm Spring Clip Basket Shaft	12-2014
850500-72	72" 400mm Spring Clip Basket Shaft	12-2015
850500-76	76" 400mm Spring Clip Basket Shaft	12-2016
850500-80	80" 400mm Spring Clip Basket Shaft	12-2017
850500-84	84" 400mm Spring Clip Basket Shaft	12-2018
850500-88	88" 400mm Spring Clip Basket Shaft	12-2019
850500-92	92" 400mm Spring Clip Basket Shaft	12-2020
850500-96	96" 400mm Spring Clip Basket Shaft	12-2021
850500-100	100" 400mm Spring Clip Basket Shaft	12-2022

Care & Maintenance
Shaft Storage - Bent or scratched shafts fail to comply with USP regulations and it is essential not to reuse shafts as a bent or scratched shaft can prevent damage occurring. See page 11 for more details.
Shaft Holders - A Waite's Thread Gauge is available to monitor basket shaft threads. See page 12.

Spin Shaft Accessories

Spin Shaft Apparatus 1 & 2
Spin shafts for Apparatus 1 & 2 offer a quick, convenient change between paddle and basket methods without the need to reset the shaft height.
These two-piece basket/paddle/spin shafts join to ensure the media to prevent potential contamination.

The Key Considerations
Spin shaft features:
- Spin On/Off Shafts may be used in any kind of dissolution operation, including the 1 Series.
- Clean Spin shaft design changes only the paddle holder and basket holder. No change for 1 Series and 2000 series.
- It is unnecessary to remove the shaft when changing apparatus.
- There is no need to replace shaft height to the testing mechanism.
- The attachment connection for Spin On/Off Shafts is located outside the media, eliminating any chance of contamination.
- Precision manufacturing has ensured USP compliance and reliable components meet USP specifications.
- Washer size is well within USP tolerance.
- Spin On/Off Shafts are engineered to minimize the risk of cross-contamination and ensure a secure connection.

VanKel Spin Shaft Accessories

Part No.	Description	OEM ref.
SPINSH-13	Spin On/Off 13" (330mm) Shaft with 1/2" (12.7mm) Paddle	12-1400
SPINSH-15	Spin On/Off 15" (381mm) Shaft with 1/2" (12.7mm) Paddle	12-1401
SPINSH-19	Spin On/Off 19" (483mm) Shaft with 1/2" (12.7mm) Paddle	12-1402
SPINSH-24	Spin On/Off 24" (609mm) Shaft with 1/2" (12.7mm) Paddle	12-1403
SPINSH-28	Spin On/Off 28" (711mm) Shaft with 1/2" (12.7mm) Paddle	12-1404
SPINSH-32	Spin On/Off 32" (813mm) Shaft with 1/2" (12.7mm) Paddle	12-1405
SPINSH-36	Spin On/Off 36" (914mm) Shaft with 1/2" (12.7mm) Paddle	12-1406
SPINSH-40	Spin On/Off 40" (1016mm) Shaft with 1/2" (12.7mm) Paddle	12-1407
SPINSH-44	Spin On/Off 44" (1118mm) Shaft with 1/2" (12.7mm) Paddle	12-1408
SPINSH-48	Spin On/Off 48" (1219mm) Shaft with 1/2" (12.7mm) Paddle	12-1409
SPINSH-52	Spin On/Off 52" (1321mm) Shaft with 1/2" (12.7mm) Paddle	12-1410
SPINSH-56	Spin On/Off 56" (1423mm) Shaft with 1/2" (12.7mm) Paddle	12-1411
SPINSH-60	Spin On/Off 60" (1524mm) Shaft with 1/2" (12.7mm) Paddle	12-1412
SPINSH-64	Spin On/Off 64" (1626mm) Shaft with 1/2" (12.7mm) Paddle	12-1413
SPINSH-68	Spin On/Off 68" (1728mm) Shaft with 1/2" (12.7mm) Paddle	12-1414
SPINSH-72	Spin On/Off 72" (1830mm) Shaft with 1/2" (12.7mm) Paddle	12-1415
SPINSH-76	Spin On/Off 76" (1932mm) Shaft with 1/2" (12.7mm) Paddle	12-1416
SPINSH-80	Spin On/Off 80" (2034mm) Shaft with 1/2" (12.7mm) Paddle	12-1417
SPINSH-84	Spin On/Off 84" (2136mm) Shaft with 1/2" (12.7mm) Paddle	12-1418
SPINSH-88	Spin On/Off 88" (2238mm) Shaft with 1/2" (12.7mm) Paddle	12-1419
SPINSH-92	Spin On/Off 92" (2340mm) Shaft with 1/2" (12.7mm) Paddle	12-1420
SPINSH-96	Spin On/Off 96" (2442mm) Shaft with 1/2" (12.7mm) Paddle	12-1421
SPINSH-100	Spin On/Off 100" (2544mm) Shaft with 1/2" (12.7mm) Paddle	12-1422

Distek Spin Shaft Accessories

Part No.	Description	OEM ref.
SPINSH-13	Spin On/Off 13" (330mm) Shaft with 1/2" (12.7mm) Paddle	2000-0101
SPINSH-15	Spin On/Off 15" (381mm) Shaft with 1/2" (12.7mm) Paddle	2000-0102
SPINSH-19	Spin On/Off 19" (483mm) Shaft with 1/2" (12.7mm) Paddle	2000-0103
SPINSH-24	Spin On/Off 24" (609mm) Shaft with 1/2" (12.7mm) Paddle	2000-0104
SPINSH-28	Spin On/Off 28" (711mm) Shaft with 1/2" (12.7mm) Paddle	2000-0105
SPINSH-32	Spin On/Off 32" (813mm) Shaft with 1/2" (12.7mm) Paddle	2000-0106
SPINSH-36	Spin On/Off 36" (914mm) Shaft with 1/2" (12.7mm) Paddle	2000-0107
SPINSH-40	Spin On/Off 40" (1016mm) Shaft with 1/2" (12.7mm) Paddle	2000-0108
SPINSH-44	Spin On/Off 44" (1118mm) Shaft with 1/2" (12.7mm) Paddle	2000-0109
SPINSH-48	Spin On/Off 48" (1219mm) Shaft with 1/2" (12.7mm) Paddle	2000-0110
SPINSH-52	Spin On/Off 52" (1321mm) Shaft with 1/2" (12.7mm) Paddle	2000-0111
SPINSH-56	Spin On/Off 56" (1423mm) Shaft with 1/2" (12.7mm) Paddle	2000-0112
SPINSH-60	Spin On/Off 60" (1524mm) Shaft with 1/2" (12.7mm) Paddle	2000-0113
SPINSH-64	Spin On/Off 64" (1626mm) Shaft with 1/2" (12.7mm) Paddle	2000-0114
SPINSH-68	Spin On/Off 68" (1728mm) Shaft with 1/2" (12.7mm) Paddle	2000-0115
SPINSH-72	Spin On/Off 72" (1830mm) Shaft with 1/2" (12.7mm) Paddle	2000-0116
SPINSH-76	Spin On/Off 76" (1932mm) Shaft with 1/2" (12.7mm) Paddle	2000-0117
SPINSH-80	Spin On/Off 80" (2034mm) Shaft with 1/2" (12.7mm) Paddle	2000-0118
SPINSH-84	Spin On/Off 84" (2136mm) Shaft with 1/2" (12.7mm) Paddle	2000-0119
SPINSH-88	Spin On/Off 88" (2238mm) Shaft with 1/2" (12.7mm) Paddle	2000-0120
SPINSH-92	Spin On/Off 92" (2340mm) Shaft with 1/2" (12.7mm) Paddle	2000-0121
SPINSH-96	Spin On/Off 96" (2442mm) Shaft with 1/2" (12.7mm) Paddle	2000-0122
SPINSH-100	Spin On/Off 100" (2544mm) Shaft with 1/2" (12.7mm) Paddle	2000-0123

Manufacturer (OEM) References

Equivalent manufacturer product part numbers appear in 'OEM Ref' columns of product listings.

An OEM Reference located within a product listing that is not attributed to a specific manufacturer will have the relevant manufacturer's initial icon adjacent to it.

When a dash (-) appears in the OEM Ref column for a product listing attributed to a specific manufacturer, it signifies an innovated product designed for use in that manufacturer's dissolution applications. Dashes elsewhere signify universal products which can be used in all dissolution applications.

Caleva

Distek

Erweka

Hanson

Pharmatest

Sotax

VanKel

Zymark

(Agilent/Varian) (Caliper LifeSciences)

All LabHut.com tablet dissolution accessories are U.S. Pharmacopeia compliant where applicable and meet machine manufacturer specifications

Information, descriptions and specifications in this publication are subject to change without notice.

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Baskets

The Basket Method Apparatus 1

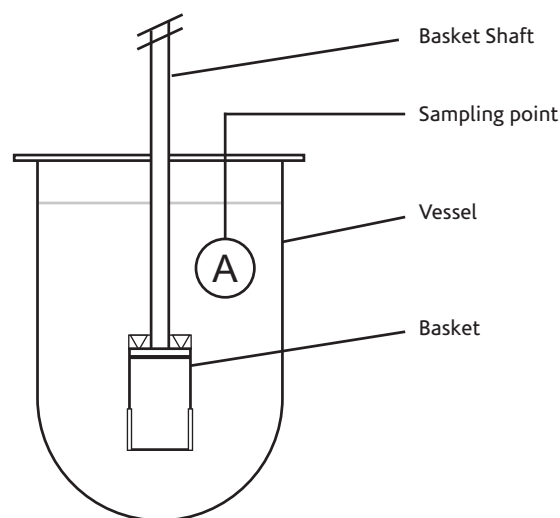
Adopted in 1970 the rotating basket method of dissolution testing was the first official method. It essentially consists of an approximately 1 inch (25.4mm) x 1 3/8 inch (34.925mm) stainless steel, 40-mesh wire basket rotated at a constant speed between 25 and 150rpm. This method is now called Apparatus 1 (or Method 1).

The apparatus consists of a metallic drive shaft connected to the cylindrical basket. The basket is positioned inside a vessel made of glass or other inert, transparent material (see page 16). The vessel contents are kept at a constant temperature by being placed inside a water bath or heating jacket. The solution in the vessel is stirred smoothly by the rotating basket.

The USP Method 1 requires a 40-mesh screen unless otherwise specified in the monograph. Other meshes can be used to solve individual problems.

Baskets and basket shafts should be serialised where possible and the serial number noted for each test.

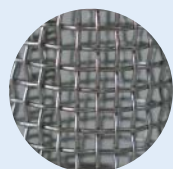
All baskets are supplied with a certificate stating that they are USP compliant where applicable, and that they meet the machine manufacturer specifications.



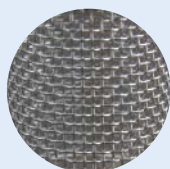
The Key Considerations

Mesh Openings – One of the biggest problems associated with the basket method involves the clogging of the mesh openings by particles or excipients or the random release of particles through the mesh to the bottom of the vessel.

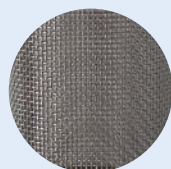
Baskets with a wide variety of mesh openings are available and if the disaggregated particle size is consistent, a variation of mesh size may solve some difficult dissolution problems.



10 Mesh



20 Mesh



40 Mesh

Sintered Mesh – Every LabHut stainless steel basket is manufactured using a sintered mesh. Sintering is a strengthening process that compresses and heats the mesh under high pressures and temperatures. This results in welded joints at all the wire overlaps and adds considerable strength and longevity to the basket.

Suppository Baskets – Made from plastic, these baskets have vertical slots instead of mesh to facilitate dissolution. Blocking and/or clogging of the mesh opening is prevented by the use of such a basket, particularly when oil-based suppositories are used.



Care & Maintenance

Basket Handling – Dissolution basket mesh is easily bent and good practice dictates that a basket should only be handled by the rim, not least because oily deposits from fingers can be left on the mesh.

Basket Cleaning – Care should be exercised to ensure that baskets are clean prior to use. Often the dosage form can clog the mesh which will prevent free media movement into the basket. Careful cleaning is required to ensure there is no contamination between tests.

Basket Storage – Baskets should be stored correctly to extend their life. They can frequently be found rolling around in a lab drawer! Baskets can easily be stored in the supplier's case or using a specially designed basket holder. See page 7.

Please note : All baskets are laser marked with a unique serial number for easy identification



Baskets

Apparatus 1

Caleva Compatible Baskets

Part No.	Description	OEM ref
BSK010-CA	10 Mesh Stainless Steel Basket	0810123
BSK020-CA	20 Mesh Stainless Steel Basket	0810021
BSK040-CA	40 Mesh Stainless Steel Basket	0810019
BSK150-CA	150 Mesh Stainless Steel Basket	0203091
BSKSUP-CA	Suppository Basket, Plastic	–



Distek Compatible Baskets

Part No.	Description	OEM ref
BSK010-DK	10 Mesh Stainless Steel Basket	2821-0160
BSK010-DKC	10 Mesh Stainless Steel Basket, Evolution Series	2800-0041
BSK020-DK	20 Mesh Stainless Steel Basket	2821-0159
BSK020-DKC	20 Mesh Stainless Steel Basket, Evolution Series	2800-0042
BSK040-DK	40 Mesh Stainless Steel Basket	2821-0072
BSK040-DKC	40 Mesh Stainless Steel Basket, Evolution Series	2800-0032
BSK100-DK	100 Mesh Stainless Steel Basket	–
BSKPTD-40	40 Mesh PTFE Coated Basket	–
BSKSUP-DK	Suppository Basket, Plastic	3250-0445



Erweka Compatible Baskets

Part No.	Description	OEM ref
BSK010-EW	10 Mesh Stainless Steel Basket	–
BSK020-EW	20 Mesh Stainless Steel Basket	90-000-0015
BSK040-EW	40 Mesh Stainless Steel Basket	90-000-0040
BSK150-EW	150 Mesh Stainless Steel Basket	–
BSKSUP-EW	Suppository Basket, Plastic	–



Baskets Apparatus 1

Hanson Compatible Baskets

Part No.	Description	OEM ref
BSK010-HR	10 Mesh Stainless Steel Basket	65-220-010
BSK020-HR	20 Mesh Stainless Steel Basket	65-220-020
BSK040-HR	40 Mesh Stainless Steel Basket	65-220-000
BSKP4H-40	40 Mesh PTFE Coated Basket	—
BSK100-HR	100 Mesh Stainless Steel Basket	—
BSK150-HR	150 Mesh Stainless Steel Basket	—
BSKSUP-HR	Suppository Basket, Plastic	65-700-048



Pharmatest Compatible Baskets

Part No.	Description	OEM ref
BSK010-PT	10 Mesh Stainless Steel Basket	311-2804
BSK020-PT	20 Mesh Stainless Steel Basket	—
BSK040-PT	40 Mesh Stainless Steel Basket	311-2803
BSKSUP-PT	Suppository Basket, Plastic	—



Stationary Baskets Can be used on most dissolution testers

Part No.	Description	OEM ref
STABSK-10	Stationary Basket Assembly with Basket Shaft and 10 Mesh Basket	12-2061
STABSK-20	Stationary Basket Assembly with Basket Shaft and 20 Mesh Basket	12-2060
STABSK-40	Stationary Basket Assembly with Basket Shaft and 40 Mesh Basket	12-2063



USP 26 Felodipine Test Basket - See page 35



Baskets Apparatus 1

Sotax Compatible Baskets

Part No.	Description	OEM ref
BSK010-ST	10 Mesh Stainless Steel Basket	—
BSK020-ST	20 Mesh Stainless Steel Basket	—
BSK040-ST	40 Mesh Stainless Steel Basket	2830
BSK150-ST	150 Mesh Stainless Steel Basket	—
BSKSUP-ST	Suppository Basket, Plastic	—



VanKel Compatible Baskets

Part No.	Description	OEM ref
BSK010-01	10 Mesh Stainless Steel Basket	12-2125
BSK020-01	20 Mesh Stainless Steel Basket	12-2120
BSK040-01	40 Mesh Stainless Steel Basket	12-2100
BSK040-01PL	40 Mesh Precision Length Stainless Steel Basket	—
BSKPTV-40	40 Mesh PTFE Coated Basket	12-2110
BSK100-01	100 Mesh Stainless Steel Basket	12-2154
BSK150-01	150 Mesh Stainless Steel Basket	12-2152
BSKSUP-01	Suppository Basket, Plastic	12-2130



Dissolution Basket Storage

Prolong the life of baskets and save money

To ensure they meet USP requirements, it is essential that for all tests, baskets are not bent or deformed.

The chances of accidentally damaging baskets can be significantly reduced with the use of a good quality basket holder, such as this.

Key Benefits:

- Compatible with all popular basket types (Caleva, Distek, Erweka, Hanson, Pharmatest, Sotax, VanKel, Zymark)
- O-rings ensure baskets are held firmly to the holder
- Stores up to **12 baskets**
- **Fully stackable**, letting you transport many baskets at a time
- **Low cost** – it pays for itself by preventing damage to just one basket!



Part No.	Description	OEM ref
BSKHLD-12	Stackable Dissolution Basket Holder, 12 Position	—

Basket Shafts

The Basket Shaft Apparatus 1

The basket shaft is the metallic drive shaft in Apparatus 1 which is connected to the cylindrical basket. See page 4 for more information on Apparatus 1. All shafts are constructed from type 316 electropolished stainless steel.

The Key Considerations

Clip or Clipless?

Spring Clips – The standard dissolution basket is designed to attach to the basket shaft using spring clips. Over time these clips can become bent or corroded which can lead to excessive wobble of the basket on the shaft.

O-Ring – The clipless basket fixes to the shaft using an O-ring instead of clips. While it can be argued that this design reduces wobble and is easier to use, the USP still specifies the use of clips and proof of equivalence may be required if a clipless alternative is to be used.

All basket shafts are laser marked with a unique serial number for easy identification



Erweka Compatible Basket Shafts

Part No.	Description	OEM ref
BSKSEW-15	15" Basket Shaft, 316SS	–
BSKSEW-19	19" Basket Shaft, 316SS	–

Care & Maintenance

Shaft Storage – Bent or scratched shafts fail to comply with USP regulations so it is essential not to store shafts on a desk or loose in a drawer where damage or corrosion can occur.

Proper storage in a basket shaft/paddle holder can prevent damage occurring. See page 11 for basket shaft holders.

Wobble – A Wobble Meter (WOBMET-MI) is available to monitor basket shaft wobble. See page 37.

Hanson Compatible Basket Shafts

Part No.	Description	OEM ref
BSKSHT-16	16" (405mm) Spring Clip Basket Shaft 65-237-000	

Distek Compatible Basket Shafts

Part No.	Description	OEM ref
BSDRNG-16	16.5" (420mm) O-Ring Style Basket Shaft	2821-0074
BSHT16-02	16.5" (420mm) Spring Clip Style Basket Shaft	–
BSDRNG-19	19" (480mm) O-Ring Style Basket Shaft	2821-0097
SHFT16.5-DK	16.5" (420mm) Detachable Shaft	2800-0165
BSKHUB-DK	Basket Adaptor, O-Ring Style	2851-1052
BSKHUB-DKC	Basket Adaptor, Evolution Series Only	3200-0038
BSKCLP-DK	Basket Clip, Evolution Series Only	3100-0017



VanKel Compatible Basket Shafts

Part No.	Description	OEM ref
BSKSHT-13	14.5" (330mm) Spring Clip Style Basket Shaft	12-2073
BSKSHT-15	15" (380mm) Spring Clip Style Basket Shaft	12-2070
BSKSHT-15C	15" (380mm) Spring Clip Style Conical Basket Shaft	12-2075
BSKSHT-15CO	15" (380mm) O-Ring Style Conical Basket Shaft	12-2050
BSKSHT-19	19" (480mm) Spring Clip Style Basket Shaft	12-2080
BSKSHT-19C	19" (480mm) Spring Clip Style Conical Basket Shaft	–
BSKSHT-19CO	19" (480mm) O-Ring Style Conical Basket Shaft	–



Spin Shaft Accessories

Spin Shaft Apparatus 1 & 2

Spin On/Off Shafts for Apparatus 1 & 2 offer a quick, convenient change between paddle and basket methods without the need to reset the shaft height.

These two-piece basket/paddle/cylinder shafts join above the media to prevent potential contamination.

The Key Considerations

Spin Shaft Features :

- Spin On/Off Shafts may be used in any VanKel dissolution apparatus, including the V-Series
- Distek Spin on/off design changes only the paddle blade and basket hub. Suitable for 2100 and 2500 series
- It is unnecessary to remove the shaft when changing apparatus
- There is no need to readjust shaft height or the locking mechanism
- The attachment connection for Spin On/Off Shafts is located outside the media, eliminating any chance of contamination
- Precision manufacturing has assured USP compliance and detachable components meet USP specifications
- Wobble data is well within USP tolerance
- Spin On/Off Shafts are engineered to minimise the risk of cross-threading and ensure a secure connection

VanKel Spin Shaft Accessories

Part No.	Description	OEM ref
SPNSHT-13	Spin ON/OFF 14.5" (370mm) Shaft For V-Series (when fully assembled)	—
SPNSHT-15	Spin ON/OFF 15" (380mm) Shaft (when fully assembled)	12-1400
SPNSHT-19	Spin ON/OFF 19" (480mm) Shaft (when fully assembled)	12-1401
SPNSHT-24	Spin ON/OFF 24" (480mm) Shaft (when fully assembled)	12-1402
SPNBSK-01	Spin ON/OFF Spring Clip Style Basket Shaft, 316 S.S.	12-1430
SPNRNG-01	Spin ON/OFF O-Ring Style Basket Shaft, 316 S.S.	12-1431
SPNBSK-ZM2	Spin ON/OFF Double O-Ring Style Conical Basket Shaft, 316 S.S.	—
SPNEPD-01	Spin ON/OFF Electropolished 316 S.S. Paddle	12-1421
SPNNPD-01	Spin ON/OFF PTFE Coated Paddle	12-1420
SPNTPD-01	Spin ON/OFF Solid PTFE Paddle	—
SPNAP6-01	Spin ON/OFF USP APP 6 Rotating Cylinder for Transdermal Patches, Electropolished 316 S.S.	—

Care & Maintenance

Spin On/Off Shaft Storage – Bent or scratched shafts fail to comply with USP regulations so it is essential not to store shafts on a desk or loose in a drawer where damage or corrosion can occur.

Proper storage in a basket shaft/paddle holder can prevent damage occurring. See page 11 for basket shaft holders.



Distek Spin Shaft Accessories

Part No.	Description	OEM ref
SHFT16.5-DK	16.5" (420mm) detachable shaft	2800-0165
BSKHUB-DK	Basket adaptor O-ring style	2851-1052
PDLBLD-DK	Paddle Blade, Screw-on, Distek	3251-1051

Paddles Apparatus 2

The Paddle Apparatus 2

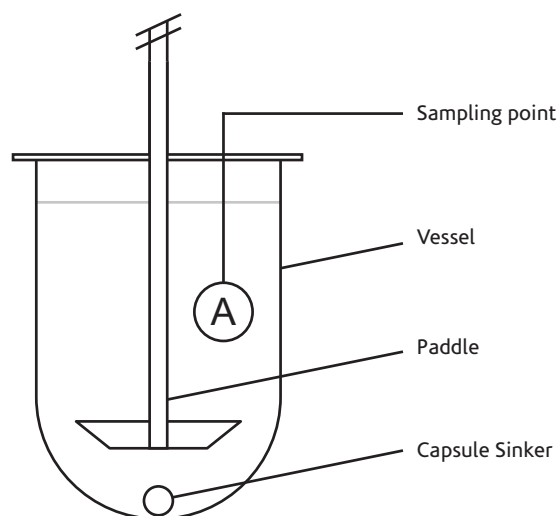
Apparatus 2, commonly known as the paddle method, has similar physical specifications to those of Apparatus 1 with a paddle substituted for the rotating basket.

Some of the dimensions and tolerances for the paddle are critical if consistent results are to be obtained from vessel to vessel.

The USP specifies that the paddle must rotate smoothly without significant wobble. The arc of the paddle blade creates considerable flow and any wobble will have an exaggerated effect on the flow profile.

The contours of the paddle blade must not include any sharp edges – at the tips for instance – that could produce turbulent instead of laminar flow patterns. The USP constrains wobble and vertical alignment with the axis of the vessel to within $\pm 2.0\text{mm}$, ASTM to 1mm.

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



The Key Considerations

Types of Paddle :

Electropolished Type 316 Stainless Steel – The strong 316 stainless steel (316 S.S.) shaft has a high resistance to bending. It is electropolished for smooth rotation.

PTFE Coated – The USP suggests that paddles may be coated with an inert coating. Most paddles are accordingly coated with PTFE or another inert coating. Such coating serves two purposes:

- It prevents corrosion and the introduction of unwanted ions into the media
- It seals the joint where the blade is attached to the shaft, thus preventing the accumulation of contaminant traces

Solid PTFE – The single piece moulded design features a fluoropolymer blade and single-piece stem moulded onto an electropolished, 316 stainless steel shaft.

The innovative design features no paddle-to-shaft joint, thus eliminating potential cross-contamination and removing a probable corrosion path. Wobble is also considerably reduced in the solid PTFE paddle due to its being a single piece cast.

Care & Maintenance

Paddle Storage – Bent or scratched paddles fail to comply with USP regulations so it is essential not to store paddles on a desk or loose in a drawer where damage or corrosion can occur.

Proper storage in a basket shaft/paddle holder can prevent damage occurring. See paddle holders on page 11.

Wobble – A Wobble Meter (WOBMET-MI) is available to monitor paddle wobble. See page 37.

Distek Compatible Paddles

Part No.	Description	OEM ref
EPD016-02	16.5" (420mm) Electropolished 316 S.S. Paddle	2800-0010
NPD016-02	16.5" (420mm) PTFE Coated Paddle	2800-0002
TPD016-02	16.5" (420mm) Solid PTFE Paddle	2800-0178
PDLBLD-DK	Paddle Blade, Screw on	3251-1051
TUMSCR-DK	Thumb Screw for Distek Compatible Paddle Shafts	–
SHFT16.5-DK	16.5" (420mm) Detachable Shaft	2800-0165

Hanson Compatible Paddles

Part No.	Description	OEM ref
EPD016-01	16" (405mm) Electropolished 316 S.S. Paddle	65-700-036
NPD016-01	16" (405mm) PTFE Coated Paddle	65-700-030
TPD016-01	16" (405mm) Solid PTFE Paddle	72-800-456
GPD016-01	16" (405mm) Gold Coated Paddle	–
TPD018-01	18" (460mm) Solid PTFE Paddle	72-800-461

VanKel Compatible Paddles

Part No.	Description	OEM ref
EPD013-01	14.5" (370mm) Electropolished 316 S.S. Paddle for V-Series	12-1035
EPD015-01	15" (380mm) Electropolished 316 S.S. Paddle	12-1030
EPD019-01	19" (485mm) Electropolished 316 S.S. Paddle	12-1040
NPD013-01	14.5" (370mm) PTFE Coated Paddle for V-Series	12-1005
NPD015-01	15" (380mm) PTFE Coated Paddle	12-1000
NPD019-01	19" (485mm) PTFE Coated Paddle	12-1010
TPD013-01	14.5" (370mm) Solid PTFE Paddle for V-Series	–
TPD015-01	15" (380mm) Solid PTFE Paddle	–
TPD019-01	19" (485mm) Solid PTFE Paddle	–
NPD024-01	24" (609mm) PTFE Coated Paddle	–

Paddles Apparatus 2



TUMSCR-DK



PTFE Coated Paddle
(NPD series)



Solid PTFE Paddle
(TPD series)



Polished Stainless
Steel Paddle
(EPD series)

Q03026

All paddles are laser marked with a unique serial number for easy identification.

Basket Shaft/Paddle Holders

Ideal for both basket shaft and paddle storage

Key Benefits:

- Prevents shafts/paddles from becoming bent or scratched
- Allows quick and easy transport of many shafts/paddles
- Handy end plate to stop shafts/paddles sliding out when carrying
- Holds all lengths and types of basket shafts and paddles
- Non-corrosive, quality plastic construction
- Space-saving, attractive design
- Available in both 12 and 16 shaft capacities

Part No.	Description	OEM ref
PADHLD-12A	Basket Shaft/Paddle Rack, 12 Position	—
PADHLD-16A	Basket Shaft/Paddle Rack, 16 Position	—



PADHLD-12A

Dual Purpose: This basket shaft/paddle holder is designed for optimal handling and storage of both basket shafts and paddles. Why not use one to keep a set of both paddles and basket shafts next to each bath?

Capsule Sinkers

The Sinkers Apparatus 2

Floating tablets rarely dissolve at a reproducible rate. Using a sinker in Apparatus 2 fixes the tablet to a certain point and aids reproducibility. Sinkers can also be useful where tablets may stick to the sides of the vessel.

USP 711 states:

"A small, loose piece of non-reactive material such as not more than a few turns of wire helix may be attached to dosage units that would otherwise float. Other validated sinker devices may be used."

Once a sinker design is selected for a particular application, the dimensions and drawings should be recorded to ensure uniformity in the procedure.

The Key Considerations

Inevitably, home-made sinkers tend not to be reproducible and so commercially available sinkers are quite popular. The choice of sinker will depend on the tablet or capsule.

General Guidelines:

Sinker Size – The sinker should have minimal surface contact with the tablet as this can affect the dissolution rate. Sinkers are available in different sizes to accommodate most capsule/tablet dimensions. See the sinker and capsule guides on pages 14 and 15.

Sinker Weight should be heavy enough to ensure that tablet sinks to the bottom of the vessel and doesn't move for the duration of the test.



PTFE Coated Sinkers can be used where there may be a reaction between steel and the tablet. They also work well with magnetic retrievers.

Uncoated type 316 stainless steel sinkers are more durable than coated sinkers.

Basket Sinkers are ideal for coin shaped tablets but care should be taken that the outer coating of the tablet does not clog the mesh.

Wire Spirals should be as wide as practically possible to avoid clogging which would affect the dissolution rate.

Pronged Sinkers

Part No.	Description	OEM ref
CAPWHT-VK	3 Pronged Capsule Sinker	12-3050 
MAGWHT-VK	3 Pronged Capsule Sinker with Magnetic Legs	12-3056 
CAPWHT-SV	3 Pronged Capsule Sinker, 316 S.S.	–








CAPWHT-VK/
MAGWHT-VK

CAPWHT-SV

 VanKel
 Sotax

Basket Sinkers

Part No.	Description	OEM ref
CERTBSK-JP	Japanese Pharmacopeia Basket Sinker (This has same dimensions as sinker shown in USP)	12-3070
BSK008-01	8 Mesh Basket Sinker	–
BSK008-JP	8 Mesh Basket Sinker, Japanese Pharmacopeia Size	–
SNK008-VK	8 Mesh Basket Sinker with Lid	12-3062 
SNK010-VK	10 Mesh Basket Sinker with Lid	12-3060 
SNK020-VK	20 Mesh Basket Sinker with Lid	– 
SNK040-VK	40 Mesh Basket Sinker with Lid	12-3064 
SNK080-VK	80 Mesh Basket Sinker with Lid	– 



CERTBSK-JP



BSK008-01



BSK008-JP



SNK008-VK



SNK010-VK



SNK040-VK

O-Ring Sinkers

O-ring sinkers feature an expandable rubber ring. This lets the capsule swell whilst still maintaining adequate sinking.

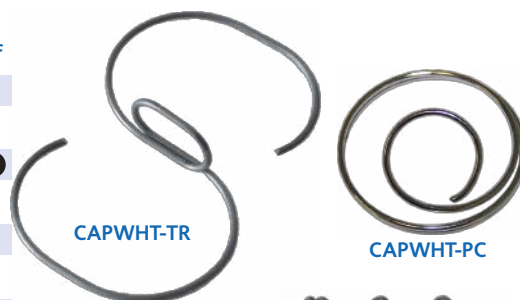
Part No.	Description	OEM ref
CAPWHT-S99	O-Ring Sinker, 316 S.S.	8399 



Capsule Sinkers

Spiral Sinkers

Part No.	Description	OEM ref
CAPWHT-TR	Time Release Capsule Sinker	–
CAPWHT-PC	Breath Film Sinker	–
CAPWST-15	4 Spiral Sotax Style 316 S.S. Capsule Sinker	8280 S
CAPWHT-04	4 Spiral PTFE Coated Capsule Sinker	–
CAPWHT-4S	4 Spiral 316 S.S. Capsule Sinker	–
CAPWHT-LG	4 Spiral PTFE Coated Capsule Sinker	–
CAPWHT-LGMT	6.5 Spiral PTFE Coated Capsule Sinker	–
CAPWHT-XL	4 Spiral PTFE Coated Capsule Sinker	–
CAPWHT-XLS	5.5 Spiral 316 S.S. Capsule Sinker	–
CAPWHT-XLSS	3 Spiral 316 S.S. Capsule Sinker	–
CAPWST-18	5 Spiral Sotax Style 316 S.S. Capsule Sinker	7346 S
CAPWST-19	6 Spiral Sotax Style 316 S.S. Capsule Sinker	8283 S
CAPWHT-2S	6 Spiral 316 S.S. Capsule Sinker	–
CAPWHT-02	6 Spiral PTFE Coated Capsule Sinker	–
CAPWHT-XS	6 Spiral 316 S.S. Capsule Sinker	–
CAPWST-23	7 Spiral Sotax Style 316 S.S. Capsule Sinker	6881 S
CAPWST-31	10 Spiral Sotax Style 316 S.S. Capsule Sinker	7349 S



All capsule sinkers are shown ACTUAL SIZE



Type 316 Stainless Steel Wire

This wire is ideal for winding your own tablet sinkers, especially if you have non-standard sized tablets. It is the same high-quality wire used to construct the LabHut sinkers and spiral sinkers and is very easy to work with.

Part No.	Description	OEM ref
WIRESK-VK	316 Stainless Steel Wire, 0.024" (0.6mm) Diameter, 50' (15m) Roll	12-3000 V



Custom Sinkers

LabHut can supply custom sinkers to any specification. Please contact us with your requirements.

Part No.	Description	OEM ref
CAPWHT-CUS	Custom weights & sinkers	–



Extensive details on all sinkers and capsules – SEE OVERLEAF

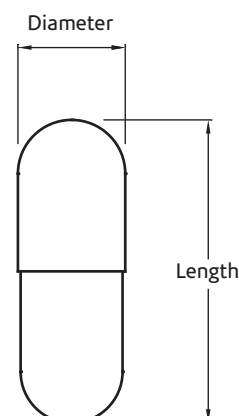
Capsule Sinkers

Sinker Type

	Part Number	Style	Material	Coating	Inside Diameter (Inches)	(mm)
Basket	CERTBSK-JP	Basket, JP	316 S.S.	—	0.470	11.9
	BSK008-01	Basket, 8 Mesh	316 S.S.	—	0.620	15.7
	BSK008-JP	Basket, 8 Mesh	316 S.S.	—	0.410	10.4
	SNK008-VK	Basket, 8 Mesh	316 S.S.	—	0.788	20.0
	SNK010-VK	Basket, 10 Mesh	316 S.S.	—	0.788	20.0
	SNK040-VK	Basket, 40 Mesh	316 S.S.	—	0.788	20.0
Pronged	CAPWHT-VK	3 Prong	Nylon / P.P.	—	0.200	5.1
	MAGWHT-VK	3 Prong	Nylon / P.P.	—	0.200	5.1
	CAPWHT-SV	3 Prong	316 S.S.	—	0.275 - 0.210	7.0 - 5.3
O-Ring	CAPWHT-S99	O-Ring	316 S.S.	—	0.466	11.8
Spiral	CAPWHT-TR	Butterfly	316 S.S.	—	0.224	5.7
	CAPWHT-PC	Strip Film	316 S.S.	—	0.436	11.0
	CAPWST-15	Helix	316 S.S.	—	0.197	5.0
	CAPWHT-04	Helix	Music Wire	PTFE	0.385	9.8
	CAPWHT-4S	Helix	316 S.S.	—	0.385	9.8
	CAPWHT-LG	Helix	Music Wire	PTFE	0.410	10.4
	CAPWHT-XL	Helix	Music Wire	PTFE	0.465	11.8
	CAPWHT-XLS	Helix	316 S.S.	—	0.465	11.8
	CAPWST-18	Helix	316 S.S.	—	0.236	6.0
	CAPWST-19	Helix	316 S.S.	—	0.276	7.0
	CAPWHT-2S	Helix	316 S.S.	—	0.370	9.4
	CAPWHT-02	Helix	Music Wire	PTFE	0.370	9.4
	CAPWHT-XS	Helix	316 S.S.	—	0.580	14.7
	CAPWST-23	Helix	316 S.S.	—	0.315	8.0
	CAPWST-31	Helix	316 S.S.	—	0.433	11.0
Wire	WIRESK-VK	Sinker Wire 50'	316 S.S.	—	—	—

Capsules

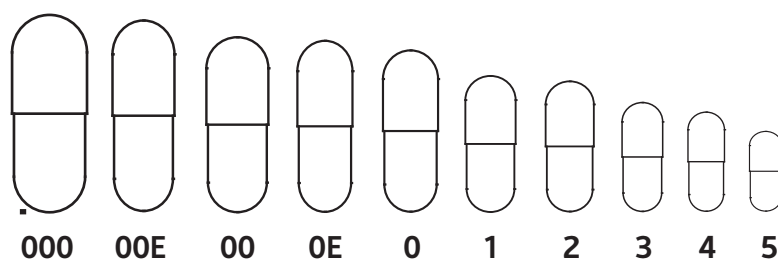
Capsule Size	Length (inches)	(mm)	Diameter (inches)	(mm)
000	1.029	26.1	0.390	9.91
00E	1.012	25.7	0.336	8.53
00	0.917	23.3	0.336	8.53
0E	0.909	23.1	0.301	7.65
0	0.854	21.7	0.301	7.65
1	0.765	19.4	0.272	6.91
2	0.709	18.0	0.250	6.35
3	0.626	15.9	0.229	5.83
4	0.563	14.3	0.209	5.32
5	0.437	11.1	0.193	4.91



Capsule Sinkers

Inside Length		Wire Diameter		Max capsule	No. of coils	Weight (g)
(Inches)	(mm)	(Inches)	(mm)	Size		
0.935	23.7	0.039	0.99	00	8	4.00
1.060	26.9	0.028	0.71	000	9	5.40
0.790	20.1	0.028	0.71	1	8	3.85
0.461	11.7	0.028	0.71	000	–	17.60
0.461	11.7	0.025	0.64	000	–	19.00
0.461	11.7	0.010	0.25	000	–	20.00
1.000	25.4	–	–	2	–	0.90
1.000	25.4	–	–	2	–	1.20
1.040	26.4	–	–	1 (min=3)	–	1.25
1.015	25.8	–	–	1	–	1.14
0.386	9.8	0.026	0.66	–	–	0.55
0.436	11.1	0.035	0.89	–	–	1.20
0.610	15.5	0.016	0.41	5	6	0.60
0.840	21.3	0.043	1.09	0	5	1.70
0.840	21.3	0.047	1.19	0	5	1.95
1.100	27.9	0.043	1.09	000	6.5	2.00
1.150	29.2	0.043	1.09	000	5.5	2.15
1.150	29.2	0.043	1.1	000	5.5	2.15
0.709	18.0	0.016	0.41	3	8.7	0.75
0.760	19.3	0.016	0.41	2	8	1.00
0.840	21.3	0.043	1.09	0	8.5	2.85
0.840	21.3	0.050	1.27	0	8.5	2.05
0.885	22.5	0.047	1.19	Special*	8.5	3.60
0.905	23.0	0.016	0.41	0	9	0.95
1.220	31.0	0.031	0.79	000	11.9	3.25
–	–	0.032	0.81	–	–	–

Capsules shown at actual size



* The Maximum Capsule Size of CAPWHT-XS is described as "Special" because this sinker is often used in veterinary applications where the capsule diameter can be very large – this sinker has an inside diameter of 0.580" (14.7mm) to accommodate such capsules.

Vessels

The Vessel

Good dissolution vessels are critical in obtaining correct and reproducible results and are sometimes overlooked as a key element in the dissolution test.

All vessels should meet the physical dimensions of the USP and have a hemispherical bottom which means that they should be perfectly rounded with no obvious join with the sides and no 'bumps' of glass on the inside. Wall thicknesses should be even and reproducible.

Although the USP states the dimensions for vessels, the tolerances are actually quite wide, meaning vessels associated with various dissolution baths are not dimensionally the same. Replacing a vessel with one not specifically designed for the instrument could impair vessel centering and paddle height. Also larger or smaller inside diameters can affect vessel hydrodynamics.

All LabHut vessels come complete with a certificate of compliance.

The Key Considerations

Glass Vessels benefit from good thermal conductivity (it is often necessary to have the temperature of the water bath as much as 2°C higher than the analysis temperature when using plastic vessels).

Another advantage of using glass vessels is their high resistance to scratching, which means they have to be replaced less frequently.

Plastic Vessels can be used in place of glass where appropriate. The plastic must not interfere with the analysis by sorbing, leaching or reacting with the analyte. Typically styrene acrylonitrile is used.

Plastic vessels have the advantage over glass in that they are very reproducible – the vessel is made from a mould rather than hand-formed. This reduces possible errors in setting the paddle height and centering and can give very reproducible results.

Another advantage of plastic vessels is that they have feet so they can stand upright independently.

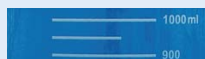
The biggest disadvantage is that plastic is very prone to scratching and cracking, requiring frequent replacement.

Peak Vessels are designed to prevent cone formation at the base of the vessel.

An undesirable poorly stirred cone shaped region can develop under the paddle during USP Apparatus 2 dissolution tests. Peak vessels have a cone shape moulded into the bottom of the vessel that improves the hydrodynamics around the dosage form and leads to more reproducible dissolution rates.

The peak effectively displaces the unstirred cone, forcing the material tested into the region of appropriate hydrodynamics, where all surfaces of the dosage are constantly and uniformly exposed to the moving medium.

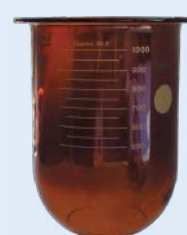
Peak vessels do not comply with USP specifications and cannot be substituted in existing applications.



Most vessels are graduated and all glass and plastic vessels are serialised for easy identification



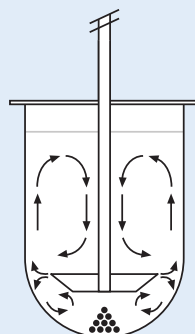
Glass Vessel



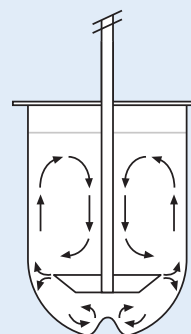
Amber Vessel



Plastic Vessel



Conventional Vessel



Peak Vessel



Peak Vessel

ASTM Vessel

Small variations in vessel dimensions have been shown by the USP & others to contribute to excessive changes in dissolution rates. The ASTM900-UN Vessels are produced by a unique method which provides a precise & consistent inside diameter and spherical radius resulting in a more reproducible dissolution profile. They are suitable for all dissolution baths and have been adopted as a standard vessel by many major pharmaceutical companies.

Inside Diameter	101.19mm ± 0.13mm	Height	161.25 ± 0.20mm
Inside Spherical Radius	50.59mm ± 0.13mm	Vessel Wall	3.0mm ± 0.10mm
Rim Diameter	133mm ± 0.5mm	Rim Thickness	3.75mm ± 0.10mm
Rim Squareness Square to Centre	± 0.10 TIR	Perpendicularity	0.5mm max

Vessels

Caleva Compatible Vessels

Part No.	Description	OEM ref
GLA900-CA	1000ml Clear Glass Vessel	0810004
GLA900-AC	1000ml Amber Glass Vessel	0810009
ASTM900-UN	ASTM Precision Vessel	–



GLA900-CA



GLA900-AC



ASTM900-UN

Distek Compatible Vessels

Part No.	Description	OEM ref
GLA200-DK	200ml Clear Glass Vessel	3010-0095
GLA500-DK	500ml Clear Glass Vessel	–
GLA900-DK	1000ml Clear Glass Vessel	3010-0096
GLA900-AD	1000ml Amber Glass Vessel	–
GLA9CR-DK	1000ml Clear Glass Vessel with Centering Ring	3010-0093
GLA9CR-AD	1000ml Amber Glass Vessel with Centering Ring	3010-0023
GLA9PK-DK	1000ml Clear Glass Peak Vessel	3010-0550
PLA900-DK	1000ml Clear Plastic Vessel	3350-0095
PLA900-AD	1000ml Amber Plastic Vessel	–
GLA02K-DK	2000ml Clear Glass Vessel	3010-0285
ASTM900-UN	ASTM Precision Vessel	–
ACCUBKT-DK	ASTM Vessel Adaptor Bracket	–
RING01-DK	Plastic Centering Ring	3350-0096
VSCLIP-DK	Vessel Hold Down Clamp	2821-0257



GLA200-DK



GLA500-DK



GLA900-DK



GLA900-AD



GLA9CR-DK



GLA9CR-AD



RING01-DK



GLA9PK-DK



PLA900-DK



VSCLIP-DK

Improve your dissolution results with precision ASTM vessels



ASTM900-UN



PLA900-AD



GLA02K-DK

Erweka Compatible Vessels

Part No.	Description	OEM ref
GLA900-EW	1000ml Clear Glass Vessel	80-000-1002
GLA900-AW	1000ml Amber Glass Vessel	80-000-1004
PLA900-EW	1000ml Clear Plastic Vessel	–
GLA02K-EW	2000ml Clear Glass Vessel	80-000-2002
ASTM900-UN	ASTM Precision Vessel	–



GLA900-EW



GLA900-AW



PLA900-EW



GLA02K-EW

Vessels

Hanson Compatible Vessels

Part No.	Description	OEM ref
GLA500-HR	500ml Clear Glass Vessel	–
GLA900-HR	1000ml Clear Glass Vessel	72-600-510
GLA900-AH	1000ml Amber Glass Vessel	72-600-556
GLA9PK-HR	1000ml Clear Glass Peak Vessel with Centering Ring	–
PLA900-HR	1000ml Clear Plastic Vessel	91-030-003
PLA900-AH	1000ml Amber Plastic Vessel	–
ASTM900-UN	ASTM Precision Vessel	–
ACCUBKT-HR	ASTM Vessel Adaptor Bracket	–
GLA02K-HR	2000ml Clear Glass Vessel	72-600-509



Pharmatest Compatible Vessels*

Part No.	Description	OEM ref
GLA900-PT	1000ml Clear Glass Vessel	303-5225
GLA900-AT	1000ml Amber Glass Vessel	303-5425
PLA900-PT	1000ml Clear Plastic Vessel	–
PLA900-AP	1000ml Amber Plastic Vessel	–
ASTM900-UN	1000ml Amber Plastic Vessel	–

* Vessels do not fit PTWS310



Universal Vessel Stands

For the safe transportation and storage of vessels

Due to their shape, dissolution vessels are difficult to hold securely. This can often result in scratched, chipped or even smashed vessels.

The non corrosive rigid ABS plastic stands are available in 6 or 8 vessel capacities and can hold vessels from any dissolution bath manufacturer.

They can also be stacked together to save bench space and enable you to transport many vessels at a time.

Part No.	Description	OEM ref
VESSTD-06H	Vessel Stand, 6 Position	–
VESSTD-08H	Vessel Stand, 8 Position	–



Vessels

Sotax Compatible Vessels

Part No.	Description	OEM ref
GLA900-ST	1000ml Clear Glass Vessel	2503
GLA900-AS	1000ml Amber Glass Vessel	2503-2



GLA900-ST

VanKel Compatible Vessels

Part No.	Description	OEM ref
GLA100-VK	100ml Clear Glass Vessel	12-5040
GLA200-VK	200ml Clear Glass Vessel	12-5050
GLA500-01	500ml Clear Glass Vessel	12-5060
GLA900-01	1000ml Clear Glass Vessel	12-5000
GLA900-AV	1000ml Amber Glass Vessel	12-5010
GLA9PK-01	1000ml Clear Glass Peak Vessel	12-5500
GLA9PK-VK	1000ml Clear TruCenter Glass Peak Vessel for V-Series Baths	12-5125
GLA900-VK	1000ml Clear TruCenter Glass Vessel for V-Series Baths	12-5035
GLA9AM-VK	1000ml Amber TruCenter Glass Vessel for V-Series Baths	12-5020
PLA900-01	1000ml Clear Plastic Vessel	12-5200
PLA900-AV	1000ml Amber Plastic Vessel	—
GLA02K-01	2000ml Clear Glass Vessel	12-5070
ASTM900-UN	ASTM Precision Vessel	—
ACCUBKT-VK	ASTM Vessel Adaptor Bracket	—
EZLBKT-01	Vessel Centering Bracket, 6 Replaceable Pins	12-6050
EZLKIT-01	Vessel Centering Bracket Repair Kit (set of 12 pins)	—
EZLPEG-01	Vessel Centering Bracket Peg	12-6065
VK600A-CR	Plastic Centering Ring Assembly for VK600/6000 Series	12-6000



GLA100-VK



GLA200-VK



GLA500-01



GLA900-01



GLA900-AV



GLA9PK-01



GLA9PK-VK



GLA900-VK



GLA9AM-VK



PLA900-01



PLA900-AV



GLA02K-01



ASTM900-UN

Experiencing Vessel Centering Brackets with Broken "Pins"?

Original equipment centering brackets often encounter one or more broken centering pins. This results in unbalanced centering, which can easily exceed USP (711) specifications.

The centering pins on **EZLBKT-01** are more robust to begin with and are easily replaceable if broken with **EZLKIT-01**.



EZLBKT-01



VK600A-CR



EZLKIT-01



EZLPEG-01

Vessel Covers

The Cover

The loss of media due to evaporation can be considerable. Vessel Covers should reduce these problems and provide openings to accommodate cannulae and stoppers.

Cover styles include all common one-piece and hinged covers, as well as a unique rotary configuration.

Industry standard openings are provided to accommodate standard cannulae and stoppers.

The Key Considerations

Evaporation Losses are reduced by using vessel covers with a minimal open area during the test. Slots and holes for temperature verification, sample introduction and sample collection should be closed when not in use.

Cannula Stoppers – Cannulae can be used with stoppers during manual sampling to ensure that the sample is always taken from the same depth.

Vessel covers must have the appropriate hole for the stopper (which is attached to the cannula) to sit in.

The stopper and cannula must match the vessel cover type.

See page 26 for sampling cannulae and stoppers.

Distek Compatible Vessel Covers

Part No.	Description	OEM ref
COVERD-00	Low Evaporation Rotary Cover, 0.53" (13.5mm) Cannula Hole Diameter	–
COVERD-01	Clear Hinged Cover, 0.53" (13.5mm) Cannula Hole Diameter	3250-0089
COVERD-02	Amber Hinged Cover, 0.53" (13.5mm) Cannula Hole Diameter	–
COVERD-BK	Clear Hinged Cover with Large Centre Hole for Easy Basket Access, 0.53" (13.5mm) Cannula Hole Diameter	3250-0070
COVERAD-BK	Amber Hinged Cover with Large Centre Hole for Easy Basket Access, 0.53" (13.5mm) Cannula Hole Diameter	–
COVERD-HG	Clear Low Evaporation Hinged Cover, 0.53" (13.5mm) Cannula Hole Diameter	–
COVDHG-SB	Clear Stationary Basket Apparatus Hinged Cover	3250-0081
COVPLG-7D	7th Position Cover Plug	3350-0109
COVPLG-DK	Probe Hole Plug	5720-4037
COVCAP-DK	Clear Cap for Basket Access Cover	3250-0019
COVCAP-AD	Amber Cap for Basket Access Cover	–
HINGE-DK	Plastic Hinge	5560-6011



COVERD-00



COVERD-01



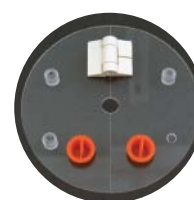
COVERD-02



COVERD-BK



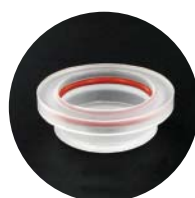
COVERAD-BK



COVERD-HG



COVPLG-DK



COVCAP-DK



HINGE-DK



COVDHG-SB



COVPLG-7D

Vessel Covers

Hanson Compatible Vessel Covers

Part No.	Description	OEM ref
COVERH-00	Low Evaporation Rotary Cover, 0.53" (13.5mm) Cannula Hole Diameter	65-233-170
COVERH-01	Clear Cover with Paddle Slot	72-500-215
COVERH-02	Grey Cover with Paddle Slot	72-800-603
COVERH-03	Amber Cover with Paddle Slot	–
COVERH-04	Clear Solid Cover	–
COVERH-HG	Clear Low Evaporation Hinged Cover, 0.53" (13.5mm) Cannula Hole Diameter	95-590-046
COVERH-LL	Low Loss Evaporation Cover, Conical Shape	–



COVERH-00



COVERH-01



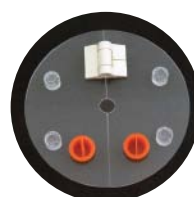
COVERH-02



COVERH-03



COVERH-04



COVERH-HG



COVERH-LL

VanKel Compatible Vessel Covers

Part No.	Description	OEM ref
COVERV-00	Low Evaporation Rotary Cover, 0.31" (7.9mm) Cannula Hole Diameter	–
COVERV-01	Clear Cover with Paddle Slot, 0.31" (7.9mm) Cannula Hole Diameter	12-6300
COVERV-02	Amber Cover with Paddle Slot, 0.31" (7.9mm) Cannula Hole Diameter	12-6320
COVERV-03	Clear Solid Cover	12-6330
COVERV-04	Clear Evaporation Cover for Dosage Delivery Module, 0.31" (7.9mm) Cannula Hole Diameter	12-6310
COVERV-HG	Clear Low Evaporation Hinged Cover, 0.31" (7.9mm) Cannula Hole Diameter	–
COVERV-LL	Low Loss Evaporation Cover, Conical Shape, 0.78" (19.8mm) Cannula Hole Diameter	12-0469
COVERV-LLHG	Low Loss Evaporation Hinged Cover, Conical Shape, 0.78" (19.8mm) Cannula Hole Diameter	12-6328
COVERV-LLSB	Stationary Basket Apparatus Low Loss Evaporation Hinged Cover, Conical Shape	–
COVERV-LLSV	TruCenter Low Loss Evaporation Hinged Cover, Conical Shape, 0.78" (19.8mm) Cannula Hole Diameter	12-6327
COVHGV-SB	Clear Stationary Basket Apparatus Hinged Cover	–
COVERV-6K	Clear Evaporation Cover for VK600/VK6000 Series, 0.31" (7.9mm) Cannula Hole Diameter	12-6200



COVERV-00



COVERV-01



COVERV-02



COVERV-03



COVERV-04



COVERV-HG



COVERV-LL



COVERV-LLHG



COVERV-LLSV



COVERV-6K

Filters

Guaranteed Chromium and heavy metal free

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

Our certification program guarantees our filters not to have any Chromium or heavy metal content which could interfere with your analysis.

The 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 (1-5 μ m) 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 35 μ m and 40 μ m 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.

Types of Filters:

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 31.

Filter Tips

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



Cannula Filters
(see all
manufacturers
pgs 23-25)



Cannula Filters
VanKel Style
(see VanKel,
pg 25)



Filter Tips
(see VanKel,
pg 25)



Filter Discs
(see Distek,
pg 23)

Filters

Guaranteed Chromium and heavy metal free

Caleva Compatible Cannula Filters

Caleva tablet dissolution baths normally use cannula 1/8" style filters with a large range of porosities. Caleva filters fit 1/8" cannulae.

Part No.	Description	Quantity	OEM Ref
FIL001-CA-100	1µm Cannula Filters, Poroplast	100 Pack	0810100
FIL001-CA-1000		1000 Case	0810101
FIL004-CA-100	4µm Cannula Filters, Poroplast	100 Pack	0810103
FIL004-CA-1000		1000 Case	0810104
FIL010-CA-100	10µm Cannula Filters, UHMW Polyethylene	100 Pack	0810106
FIL010-CA-1000		1000 Case	0810107
FIL035-CA-100	35µm Cannula Filters, UHMW Polyethylene	100 Pack	0810142
FIL035-CA-1000		1000 Case	0810143
FIL040-CA-100	40µm Cannula Filters, UHMW Polyethylene	100 Pack	0810097
FIL040-CA-1000		1000 Case	0810098
FIL070-CA-100	70µm Cannula Filters, UHMW Polyethylene	100 Pack	–
FIL070-CA-1000		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	10µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack	5720-0500
FIL10S-DK-1000		1000 Case	5720-0501
FIL20S-DK-100	20µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack	–
FIL20S-DK-1000		1000 Case	–
FIL35S-DK-100	35µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack	5720-0220-100
FIL35S-DK-1000		1000 Case	5720-0220-1000
FIL45S-DK-100	45µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack	5720-0020-100
FIL45S-DK-1000		1000 Case	5720-0020-1000
FIL70S-DK-100	70µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack	5720-0502
FIL70S-DK-1000		1000 Case	5720-0503



Distek
Cannula Filter



Distek
Filter Disk

Erweka Compatible Cannula Filters

Erweka tablet dissolution baths normally use 1/8" cannula style filters with a large range of porosities. Erweka filters fit 1/8" cannulae.

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



Erweka
Cannula Filter

Filters

Guaranteed Chromium and heavy metal free

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-ST-100	10µm Cannula Filters, UHMW Polyethylene	100 Pack	27-101-074
FIL010-ST-1000	10µm Cannula Filters, UHMW Polyethylene	1000 Case	27-101-091
FIL035-ST-100	35µm Cannula Filters, UHMW Polyethylene	100 Pack	27-101-085
FIL035-ST-1000	35µm Cannula Filters, UHMW Polyethylene	1000 Case	27-101-095
FIL070-ST-100	70µm Cannula Filters, UHMW Polyethylene	100 Pack	27-101-082
FIL070-ST-1000	70µm Cannula Filters, UHMW Polyethylene	1000 Case	27-101-092



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	10µm Cannula Filters, UHMW Polyethylene	1000 Case	17-4000
FIL010-01K-100	10µm Cannula Filters, PVDF with green microspheres	100 Pack	17-4040
FIL010-01K-1000	10µm Cannula Filters, PVDF with green microspheres	1000 Case	17-4040
FIL010-VK-100	10µm Direct Fit Cannula Filters (no Tygon tubing needed), UHMW Polyethylene	100 Pack	–
FIL010-VK-1000	10µm Direct Fit Cannula Filters (no Tygon tubing needed), UHMW Polyethylene	1000 Case	–
FIL020-01-100	20µm Cannula Filters, UHMW Polyethylene	100 Pack	–
FIL020-01-1000	20µm Cannula Filters, UHMW Polyethylene	1000 Case	–
FIL035-01-100	35µm Cannula Filters, UHMW Polyethylene	100 Pack	17-4010
FIL035-01-1000	35µm Cannula Filters, UHMW Polyethylene	1000 Case	17-4010
FIL035-VK-100	35µm Direct Fit Cannula Filters (no Tygon tubing needed), UHMW Polyethylene	100 Pack	–
FIL035-VK-1000	35µm Direct Fit Cannula Filters (no Tygon tubing needed), UHMW Polyethylene	1000 Case	–
FIL035-01K-100	35µm Cannula Filters, PVDF with yellow microspheres	100 Pack	17-4050
FIL035-01K-1000	35µm Cannula Filters, PVDF with yellow microspheres	1000 Case	17-4050
FIL045-01-100	45µm Cannula Filters, UHMW Polyethylene	100 Pack	–
FIL045-01-1000	45µm Cannula Filters, UHMW Polyethylene	1000 Case	–
FIL070-01-100	70µm Cannula Filters, UHMW Polyethylene	100 Pack	17-4020
FIL070-01-1000	70µm Cannula Filters, UHMW Polyethylene	1000 Case	17-4020
FIL070-VK-100	70µm Direct Fit Cannula Filters (no Tygon tubing needed), UHMW Polyethylene	100 Pack	–
FIL070-VK-1000	70µm Direct Fit Cannula Filters (no Tygon tubing needed), UHMW Polyethylene	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



FIL010-01-100/1000



FIL020-01-100/1000



FIL035-01-100/1000



FIL070-01-100/1000



VanKel Filter Tip

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!

Filters

Guaranteed Chromium and heavy metal free

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	1µm Cannula Filters, Poroplast	100 Pack	27-101-087
FIL001-HR-1000		1000 Case	27-101-097
FIL004-HR-100	4µm Cannula Filters, Poroplast	100 Pack	27-101-088
FIL004-HR-1000		1000 Case	27-101-098
FIL010-HR-100	10µm Cannula Filters, UHMW Polyethylene	100 Pack	27-101-074
FIL010-HR-1000		1000 Case	27-101-091
FIL010-HRK-100	10µm Cannula Filters, PVDF Material (with Green MicroSpheres)	100 Pack	–
FIL010-HRK-1000		1000 Case	–
FIL020-HR-100	20µm Cannula Filters, UHMW Polyethylene	100 Pack	–
FIL020-HR-1000		1000 Case	–
FIL035-HR-100	35µm Cannula Filters, UHMW Polyethylene	100 Pack	27-101-085
FIL035-HR-1000		1000 Case	27-101-095
FIL035-HRK-100	35µm Cannula Filters, PVDF Material (with Yellow MicroSpheres)	100 Pack	27-101-089
FIL035-HRK-1000		1000 Case	–
FIL045-HR-100	45µm Cannula Filters, UHMW Polyethylene	100 Pack	–
FIL045-HR-1000		1000 Case	–
FIL070-HR-100	70µm Cannula Filters, UHMW Polyethylene	100 Pack	27-101-082
FIL070-HR-1000		1000 Case	27-101-092
FIL10S-HR-100	10µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack	27-101-083
FIL10S-HR-1000		1000 Case	27-101-093
FIL35S-HR-100	35µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack	27-101-086
FIL35S-HR-1000		1000 Case	27-101-096
FIL45S-HR-100	45µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack	27-101-090
FIL45S-HR-1000		1000 Case	–
FIL70S-HR-100	70µm Cannula Filters, 1/16" (1.6mm) ID, UHMW Polyethylene	100 Pack	27-101-084
FIL70S-HR-1000		1000 Case	27-101-094



FIL010-HR-100/1000



FIL10S-HR-100/1000



FIL070-HR-100/1000

Pharmatest Compatible Cannula Filters

Pharmatest dissolution baths normally use cannula style filters.

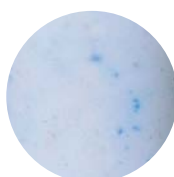
Part No.	Description	Quantity	OEM Ref
FIL001-PT-100	1µm Cannula Filters, Poroplast	100 Pack	–
FIL001-PT-1000		1000 Case	–
FIL004-PT-100	4µm Cannula Filters, Poroplast	100 Pack	–
FIL004-PT-1000		1000 Case	–
FIL005-PT-100	5µm Cannula Filters, UHMW Polyethylene	100 Pack	31-63511-50
FIL005-PT-1000		1000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



Pharmatest
Cannula Filter

Cannula Filters Colour Coding

Some Cannula filters are colour coded for easy identification of porosity.



Sampling Cannulae

The Cannula

Almost every dissolution test relies on samples being taken to produce a result. It is important that the sampling method does not adversely affect the accuracy of the dissolution test. Sampling errors are very common and are often the cause of erroneous results.

The USP defines the sampling point as: "A zone half way between the top of the media and top of the paddle or basket not less than 1cm from the vessel wall. The sampling position is critical but so too is the type of sampling cannula (also known as a probe) used.

The Key Considerations

Sampling Position – The sampling position is important particularly for tests with baskets as there can be a concentration profile between the bottom of the vessel and the stirring element.

The sampling position is different for 500ml and 900ml tests. This can create problems for equipment that uses 'through the shaft' sampling.

Cannula Length – Cannulae vary in length : 4.75" (120mm) is used for 900ml, 7.75" (197mm) is used for 500ml and extended lengths are normally used for "through the head sampling" whereby the cannula passes through the drive head of the dissolution bath.

Cannula Material – The cannulae are made from either stainless steel or PEEK so that they do not adsorb or interfere with the active ingredient.

Stoppers – Cannulae can be used with stoppers during manual sampling to ensure that the sample is always taken from the same depth. Stoppers are attached to the cannulae and sit in a hole in the vessel cover. If these are to be used then it is important to get the stopper and cannula to match the vessel cover type.

The range of self-tightening stoppers can be installed and positioned without the need for tools such as screwdrivers or spanners. See below for more details.

Selecting a Self-Tightening Cannula Stopper

Self-tightening cannula stoppers offer a convenient method of setting the cannula sampling position in accordance with USP 711.

Adjustable cannula stoppers are available for Distek, Hanson and VanKel cannulae.

Since there are numerous configurations of cannulae and dissolution instruments in common use, the specific application should be reviewed to ensure correct stopper selection.

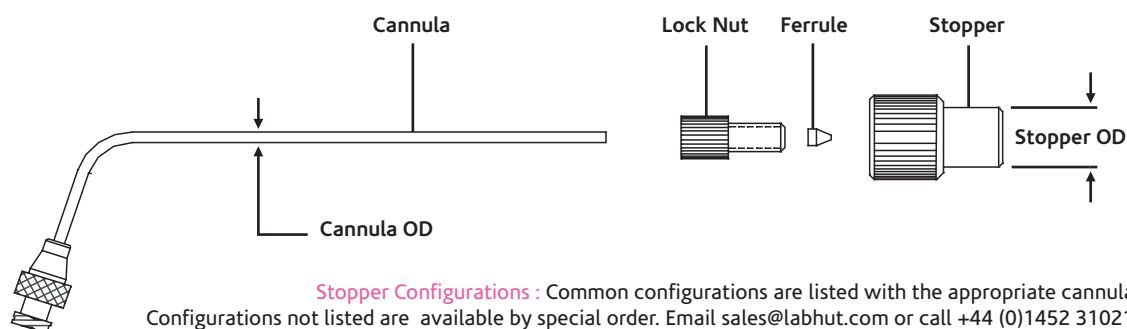
The two factors which determine the specific stopper choice are:

- 1) Cannula outside diameter
- 2) Stopper outside diameter

The part numbering system incorporates both cannula and stopper outside diameters.

Cannula OD		Stopper OD	
Inches	Manufacturer	Inches	Manufacturer
.065 (1/16")	Distek/Hanson	.31	VanKel
.078	VanKel	.44	Hanson/Waters
.125 (1/8")	Hanson	.53	Distek
.142	VanKel		

Part Numbering System:
CANSTP - 065 - 53
Cannula OD Stopper OD



Sampling Cannulae

Caleva Compatible Sampling Cannulae

Part No.	Description	OEM ref
CAN475-SH	120mm (4.75") Bent Stainless Steel Cannula with Luer Adapter, for 900ml Manual Sampling	–
CAN775-SH	195mm (7.75") Bent Stainless Steel Cannula with Luer Adapter, for 500ml Manual Sampling	–
CAN475-PH	120mm (4.75") Bent PEEK Cannula with Luer Adapter, for 900ml Manual Sampling	–
CAN775-PH	195mm (7.75") Bent PEEK Cannula with Luer Adapter, for 500ml Manual Sampling	–
CANSTP-CA	Adjustable Cannula Stopper	–



Distek Compatible Sampling Cannulae

Part No.	Description	OEM ref
CAN500-DK	500ml Sampling Probe	2910-0500
CAN900-DK	900ml Sampling Probe	2910-0900
CAN01K-DK	1000ml Sampling Probe	2910-1000
CAN5PK-DK16	500ml PEEK Sampling Probe, 1/16" (1.6mm) OD	–
CAN9PK-DK8	900ml PEEK Sampling Probe, 1/8" (3.2mm) OD	–
CANRET-DK	Return Probe	2910-0001
CANSTP-065-53	Distek/Hanson 1/16" (1.6mm) Self-Tightening Cannula Stopper for Distek Covers	–
FILASY-DK	Inline Filter Housing Assembly for Distek Style Filters	–
LE87-6	Male Luer to Female Luer, Thread Style Elbow	5720-9074
SFTL-6	Female Luer Lug Style with 5/16" Hex to 1/4-28 UNF Thread	5720-9059
SMTLL-6	Male Luer Integral Lock Ring to 1/4-28 UNF Thread	5720-9060



Filters for all Cannulae – See pages 22-25

Sampling Cannulae

Erweka Compatible Sampling Cannulae

Part No.	Description	OEM ref
CAN475-SH	120mm (4.75") Bent Stainless Steel Cannula with Luer Adapter, for 900ml Manual Sampling	–
CAN775-SH	195mm (7.75") Bent Stainless Steel Cannula with Luer Adapter, for 500ml Manual Sampling	–
CAN015-SH	380mm (15") Bent Stainless Steel Cannula with Luer Adapter, Through Head Mount	–
CAN475-PH	120mm (4.75") Bent PEEK Cannula with Luer Adapter, for 900ml Manual Sampling	–
CAN775-PH	195mm (7.75") Bent PEEK Cannula with Luer Adapter, for 500ml Manual Sampling	–
CAN015-PH	380mm (15") Bent PEEK Cannula with Luer Adapter, Through Head Mount	–
CANSTP-EW	Adjustable Cannula Stopper	–



Hanson Compatible Sampling Cannulae

Part No.	Description	OEM ref
CAN475-HR	4.75" (120mm) Bent Stainless Steel Cannula with Luer Adapter and Permanent Tip	–
CAN775-HR	7.75" (195mm) Bent Stainless Steel Cannula with Luer Adapter and Permanent Tip	–
CAN015-HR	15" (380mm) Bent Stainless Steel Cannula, 1/8" (3.2mm) OD, 0.085" (2.2mm) ID	72-300-304
CAN475-SH	4.75" (120mm) Bent Stainless Steel Cannula with Luer Adapter, for 900ml Manual Sampling, 1/8" (3.2mm) OD	95-590-002
CAN775-SH	7.75" (195mm) Bent Stainless Steel Cannula with Luer Adapter, for 500ml Manual Sampling, 1/8" (3.2mm) OD	95-590-001
CAN015-SH	15" (380mm) Bent Stainless Steel Cannula with Luer Adapter, Through Head Mount, 1/8" (3.2mm) OD	95-590-003
CANS15-SH	15" (380mm) Straight Stainless Steel Cannula with Luer Adapter, Through Head Mount, 1/8" (3.2mm) OD	–
CAN475-PH	4.75" (120mm) Bent PEEK Cannula with Luer Adapter, for 900ml Manual Sampling, 1/8" (3.2mm) OD	95-590-005
CAN775-PH	7.75" (195mm) Bent PEEK Cannula with Luer Adapter, for 500ml Manual Sampling, 1/8" (3.2mm) OD	95-590-004
CAN015-PH	15" (380mm) Bent PEEK Cannula with Luer Adapter, Through Head Mount, 1/8" (3.2mm) OD	95-590-006
CANS15-PH	15" (380mm) Straight PEEK Cannula with Luer Adapter, 1/8" (3.2mm) OD	–
CANSTP-065-53	Distek/Hanson 1/16" (1.6mm) Self-Tightening Cannula Stopper for Distek Covers	–
CANSTP-125-31	Hanson 1/8" (3.2mm) OD Self-Tightening Cannula Stopper for VanKel Covers	–
CANSTP-125-53	Hanson 1/8" (3.2mm) OD Self-Tightening Cannula Stopper for Distek Covers	–
TUMSCR-HR	Adjustable Cannula Stopper (for use with all 15" (380mm) cannulae)	–



Sampling Cannulae

Pharmatest Compatible Sampling Cannulae

Part No.	Description	OEM ref
CAN475-HR	120mm (4.75") Bent Stainless Steel Cannula with Luer Adapter, for 900ml Manual Sampling	-
CAN775-HR	195mm (7.75") Bent Stainless Steel Cannula with Luer Adapter, for 500ml Manual Sampling	-
CAN475-PH	120mm (4.75") Bent PEEK Cannula with Luer Adapter, for 900ml Manual Sampling	-
CAN775-PH	195mm (7.75") Bent PEEK Cannula with Luer Adapter, for 500ml Manual Sampling	-
CANSTP-PT	Adjustable Cannula Stopper	-



Sotax Compatible Sampling Cannulae

Part No.	Description	OEM ref
CAN013-ST	330mm (13") Bent Stainless Steel Cannula with Luer Adapter, Through Head Mount	-
CAN013-ST-5	330mm (13") Stainless Steel Cannula, Including Stopper and Sleeve, for 500ml Sampling	-
CAN013-ST-9	330mm (13") Stainless Steel Cannula, Including Stopper and Sleeve, for 900ml Sampling	-
PRBFSR-ST	Combined Sample/Return Cannula with Filter Housing	-
PRBNSR-ST	Combined Sample/Return Cannula without Filter Housing	-
PRBFSR-5S	500ml Sample/Return Probe Fixed with Filter Housing, Stopper & Up/Down Collars	-
PRBFSR-9S	900ml Sample/Return Probe Fixed with Filter Housing, Stopper & Up/Down Collars	-
CANSTP-ST	Adjustable Cannula Stopper (for use with CAN013-ST)	-
CADSTP-ST	Validation Stopper (two holes for manual and auto cannulae)	-



Sampling Cannulae

VanKel Compatible Sampling Cannulae

Part No.	Description	OEM ref
CAN475-01	4.75" (120mm) bent SS cannula with luer adapter, for 900ml sampling, 0.083" (2.1mm) OD	12-3200
CAN775-01	7.75" (195mm) bent SS cannula with luer adapter, for 500ml sampling, 0.083" (2.1mm) OD	12-3210
CA8475-VK	4.75" (120mm) bent SS cannula with luer adapter, for 900ml sampling, 1/8" (3.2mm) OD	—
CA8775-VK	7.75" (195mm) bent SS cannula with luer adapter, for 500ml sampling, 1/8" (3.2mm) OD	—
CA8015-VK	15" (380mm) bent SS cannula with luer adapter, through head mount, 1/8" (3.2mm) OD	—
CA8475-PV	4.75" (120mm) bent PEEK cannula with luer adapter, for 900ml sampling, 1/8" (3.2mm) OD	—
CA8775-PV	7.75" (195mm) bent PEEK cannula with luer adapter, for 500ml sampling, 1/8" (3.2mm) OD	—
CA8015-PV	15" (380mm) bent PEEK cannula with luer adapter, through head mount, 1/8" (3.2mm) OD	—
CANRET-25	2.5" (65mm) Autosampling Return Cannula	17-3320
CAN900-45	4.5" (115mm) Autosampling Cannula	17-3300
CAN500-60	6.5" (165mm) Autosampling Cannula	17-3305
PROBEX-VK	500ml Cannula Extension Kit	17-3306
CANSTP-078-31	VanKel Standard Self-Tightening Cannula Stopper for VanKel Covers	—
CANSTP-142-31	VanKel 1/8" (3.2mm) OD Self-Tightening Cannula Stopper for VanKel Covers	—



Filters for all Cannulae – See pages 22-25

Sampling Cannulae

Hi-Cap High Capacity Sampling Cannulae

Increased capacity for most brands of dissolution bath

Available for 500ml, 900ml and 1000ml tests, this new style sampling probe has an inert twist-lock housing which safely contains a standard VanKel cannula filter. This means that the same cannula filters can be used for different dissolution baths, offering increased flexibility.

The surface area of the VanKel cannula filter is greater than 7 times that of the small filter disc that is traditionally used in this style of sample probe.

The Hi-Cap's thin low-volume stainless steel cannula can remain in the vessel throughout the dissolution test without affecting the dissolution result, removing the need for an automated probe lift. The cannula simply sits in the vessel cover and samples from the same position every time.

Cannula Assembly

Part No.	Description	OEM ref
CAN500-DV	Hi-Cap High capacity sampling cannula for most dissolution baths, 500ml	–
CAN900-DV	Hi-Cap High capacity sampling cannula for most dissolution baths, 900ml	–
CAN01K-DV	Hi-Cap High capacity sampling cannula for most dissolution baths, 1000ml	–

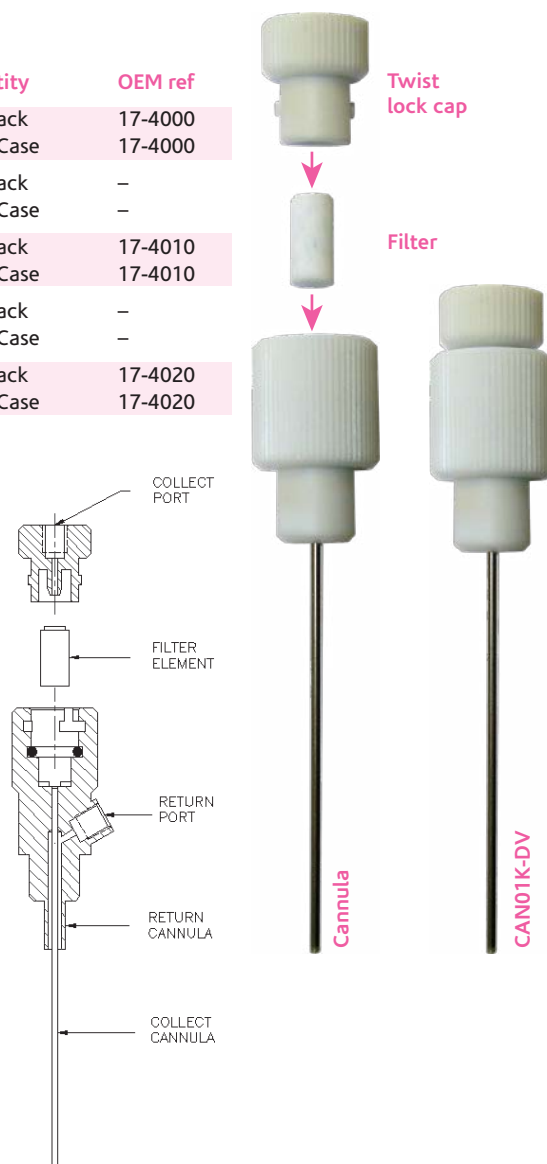
Hi-Cap Compatible Cannulae Filters

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
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
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

Dual Resident Cannulae

These cannulae offer the same features and benefits as the Hi-Cap sampling cannulae described above but with the addition of a Return Port. The Return Port provides a 'return to vessel' path for Dissolution Protocols which require samples to be returned or Protocols which require media replacement. Since both the collect and return port are integrated into a single housing, only one hole in the vessel cover is used.

Media Volume	Distek	VanKel	Hanson
500ml	CAN500-DDV	CAN500-DVV	CAN500-DHV
900ml	CAN900-DDV	CAN500-DVV	CAN900-DHV
1000ml	CAN01K-DDV	CAN01K-DVV	CAN01K-DHV
2000ml	CAN02K-DDV	CAN02K-DVV	CAN02K-DHV



Transdermal Testing Apparatus 5

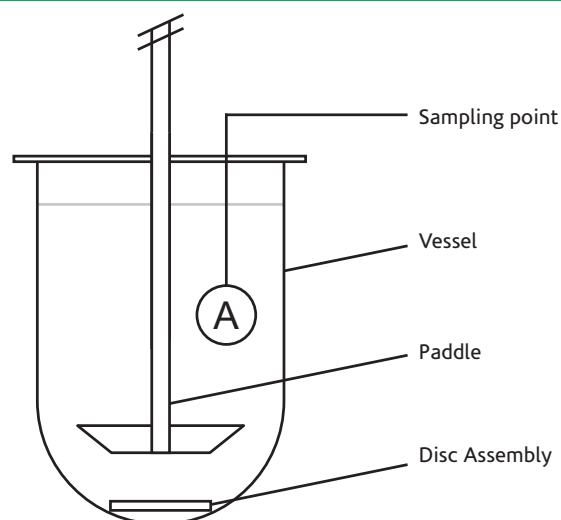
Paddle Over Disc Apparatus 5

With paddle over disc, a transdermal patch is placed either between a glass disc and an inert PTFE mesh (APPFIVE-HR), or directly onto a stainless steel mesh (APPFIVE-V35, APPFIVE-V56 and APPFIVE-V80). This is placed at the bottom of the vessel, with the release side facing upwards, under a rotating paddle.

Transdermal testing is carried out at 32°C to reflect the temperature of the skin.

Other variables such as the height setting and sampling requirements are the same as for USP Method 2.

The LabHut USP 5 apparatus is compatible with all brands of dissolution bath.



The Key Considerations

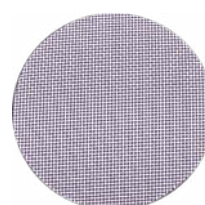
The APPFIVE-HR watch glass patch holder is a borosilicate watch glass with a 17 mesh PTFE screen, held together by plastic clips. Patches up to 90mm in diameter can be tested. It is compatible with all brands of dissolution bath and conforms exactly to the USP specification.

The APPFIVE-V35, APPFIVE-V56 and APPFIVE-V80 patch holders have stainless steel screens and can accommodate various patch sizes.

Various meshes are available for APPFIVE-V35.

Transdermal Patch Holders and Accessories

Part No.	Description	OEM ref
APPFIVE-HR	Watch Glass Transdermal Patch Holder with 17 Mesh Screen and 4 Plastic Clips	65-190-093 H
APPFIVE-HRCLIP	Plastic Clip for APPFIVE-HR (each)	65-190-205 H
APPFIVE-HRSCR	17 Mesh PTFE Screen for APPFIVE-HR	65-190-190 H
APPFIVE-V35	Transdermal Patch Holder, 1.38" (35mm) Opening (40 Mesh Screen)	12-4200 V
APPFIVE-V56	Transdermal Patch Holder, 2.20" (56mm) Opening (120 Mesh Screen)	12-4230 V
APPFIVE-V80	Transdermal Patch Holder, 3.15" (80mm) Opening (16 x 16 Mesh Screen)	—
APP5S16-35	16 Mesh 316 Stainless Steel Screen for APPFIVE-V35 (pack of 25)	—
APP5S20-35	20 Mesh 316 Stainless Steel Screen for APPFIVE-V35 (pack of 25)	— APPFIVE-V35
APP5S30-35	30 Mesh 316 Stainless Steel Screen for APPFIVE-V35 (pack of 25)	—
APP5S40-35	40 Mesh 316 Stainless Steel Screen for APPFIVE-V35 (pack of 25)	—
TRANDE-SC	Custom Transdermal Screen	—



APPFIVE-HRSCR



APPFIVE-HRCLIP



APPFIVE-HR



APPFIVE-V35



APPFIVE-V56



APPFIVE-V80



TRANDE-SC

H Hanson
V VanKel



APP5S16-35



APP5S20-35



APP5S30-35



APP5S40-35

Transdermal Testing Apparatus 6

Rotating Cylinder Apparatus 6

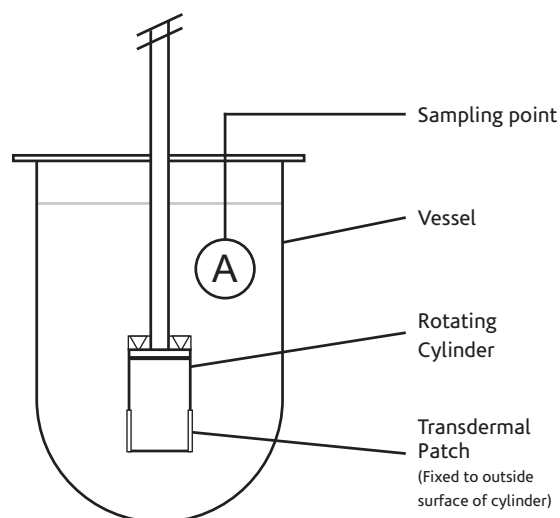
The USP 6 rotating cylinder is similar to USP Method 1 (the rotating basket). With USP Method 6 however, the basket assembly is replaced by a solid stainless steel cylinder.

The transdermal patch is fixed to the outside surface of the cylinder.

Transdermal testing is carried out at 32°C to reflect the temperature of the skin.

Other variables such as the height setting and sampling requirements are the same as for USP Method 1.

The LabHut USP 6 apparatus is compatible with most brands of dissolution bath.






The Key Considerations

The extension (APPSIX-EX) is used when the transdermal patch requires a larger area (see picture below).

Rotating Cylinder
assembled with extension



Rotating Cylinder





Part No.	Description	OEM ref
APPSIX-01	Rotating Cylinder for Transdermal Patches, Electropolished 316 Stainless Steel	12-1360  65-590-011 
APPSIX-EX	Rotating Cylinder Extension for APPSIX-01, Electropolished 316 Stainless Steel	- 65-590-012 

 Hanson
 VanKel



Biodissolution Accessories Apparatus 3

Caps & Covers

Part No.	Description	OEM ref
EVACOV-05	PVC Evaporation Cover for 300ml Glass Vessels	27-1500 
EVACOV-07	PTFE Evaporation Cover for 300ml Glass Vessels	–
LOWCAP-03	Lower Cap for 300ml Glass Vessels	27-1020 
LOWCAP-05	Lower Cap for 300ml Glass Vessels, Wider VanKel Style	27-1050 
UPPCAP-03	Upper Cap for 300ml Glass Vessels	27-1000 



EVACOV-05



EVACOV-07



LOWCAP-03





LOWCAP-05



UPPCAP-03

Vessels & Sampling Tubes

Part No.	Description	OEM ref
GLA300-01	Outer Vessel, 300ml, Clear Glass, Non-graduated	–
GLA300-02	Outer Vessel, 300ml, Clear Glass, Graduated	27-5100 
GLA300-03	Outer Vessel, 300ml, Clear Glass, Class A, with 250ml mark	–
GLA300-AV	Outer Vessel, 300ml, Amber Glass, Non-graduated	–
GLAIST-01	Inner Sampling Tube, 100ml, Clear Glass	27-5000 
GLAIST-AV	Inner Sampling Tube, 100ml, Amber Glass	–



GLA300-01



GLA300-02









GLA300-03



GLA300-AV

Screens

Screens with 1.25" diameters for 300ml glass vessels.

Part No.	Description	OEM ref
MSHSCR-20	20 Mesh 316 Stainless Steel Screen	27-2100 
MSHSCR-30	30 Mesh 316 Stainless Steel Screen	27-2103 
MSHSCR-40	40 Mesh 316 Stainless Steel Screen	27-2105 
POLSCR-20	20 Mesh Polypropylene Screen	27-2000 
POLSCR-30	30 Mesh Polypropylene Screen	–
POLSCR-40	40 Mesh Polypropylene Screen	27-2005 
POLSCR-1K	100 Mesh Polypropylene Screen	27-2015 



GLAIST-01



GLAIST-AV



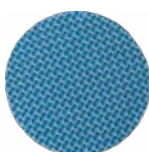
MSHSCR-20



MSHSCR-30



MSHSCR-40



POLSCR-20



POLSCR-30



POLSCR-40



POLSCR-1K

Felodipine Test Basket Apparatus 26

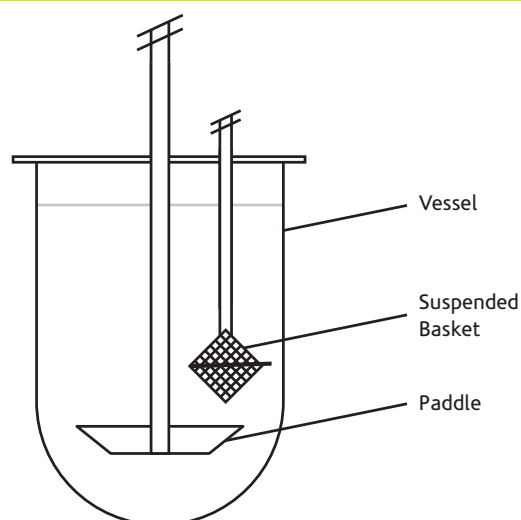
The Stationary Basket Apparatus 26

The USP Monograph for Felodipine Extended-Release Tablets specifies the use of a quadrangular stationary basket. The LabHut Stationary Basket fully complies with the USP Monograph.

The LabHut Felodipine Basket is made from precision welded stainless steel mesh and the basket is securely fixed to the shaft and will not easily bend or break off.

The basket also features a small flap to prevent the tablet escaping during testing. The flap is fabricated such that it will not fall off or be lost during use.

USP 26 requires the use of a basket suspended a precise distance from the paddle shaft, which in turn requires the use of a modified vessel cover.



The Key Considerations

The Stationary Basket method offers a potential solution to problems associated with floating, sticking and swelling dosage forms.

While the use of sinkers may solve similar problems, their final position in the dissolution vessel may vary, thus contributing to variations in test results – these variations can be eliminated by using the stationary basket.

(Suitability for certain applications must be verified.)



Compatible Vessel Covers (see page 20/21)

Part No.	Description	OEM ref
COVDHG-SB	Clear Stationary Basket Apparatus Hinged Cover for Distek Baths	3250-0081 D
COVHGV-SB	Clear Stationary Basket Apparatus Hinged Cover for VanKel Baths	–
COVERV-LLSB	Clear low loss evaporation cover for stationary baskets for VanKel Baths	–

Stationary Basket Spacer (see page 37)

Part No.	Description	OEM ref
DEPSET-SB	Stationary Basket Spacer, 1cm	–

Felodipine Stationary Basket

Part No.	Description	OEM ref
STABSK-VK8	USP 26 Felodipine Test Stationary Basket	12-2069 V
STABSK-10	Stationary Basket Assembly with Basket Shaft and 10 Mesh Basket	12-2061 V
STABSK-20	Stationary Basket Assembly with Basket Shaft and 20 Mesh Basket	12-2060 V
STABSK-40	Stationary Basket Assembly with Basket Shaft and 40 Mesh Basket	12-2063 V



Calibration Tools

Controlling Hardware Variables

It is important to ensure the dissolution bath is working as intended, and giving precise and reproducible results. To do this it is important that the bath meets the USP or ASTM physical specification. The ASTM variables are tighter as they rely only on the physical measurement whereas the USP also requires a test using calibrator tablets.

The Key variables are:

Specification	ASTM	USP
Shaft Wobble	Less than 1.0 mm	"Not significant"
Shaft Verticality	Must be vertical, bubble within the lines	Not defined
Basket Wobble	Less than 1.0 mm at bottom rim	Less than 1.0mm at bottom rim
Vessel Centering	1.0mm	2mm
Paddle/Basket Height	+/- 8% or 2 mm	2mm
Rotation	2% or 2 rpm (whichever is the largest)	4%
Temperature	0.5°C	0.5°C
Vibration	No significant vibration	No significant vibration
Vessel verticality	1° from vertical	Not specified

Labhut provide a comprehensive set of validation tools to measure these variables. All tools (except the verticality meter) are supplied with a traceable certificate of calibration.

Wobble Meter (WOBMET-MI) The wobble meter uses a special vessel cover that fits inside the top of the vessel. The gauge is firmly attached to this cover then placed against the shaft or basket. The shaft is then rotated at a slow speed and the deviation from the vertical is displayed on the easy-to-read dial. The gauge works with all "open" dissolution baths (where you can access the vessel during the test).

Vibration meter (VIBMET-UN) This simple vibration meter allows you to quickly assess vibration levels and ensure that low levels are maintained when new equipment is introduced into the lab or after routine bath maintenance.

It uses digital electronics but is equipped with an analogue needle display. For this type of device, an analogue display is better than a digital one because it gives a much better feel for the nature of the vibrations.

The meter uses an accelerometer probe that is calibrated to the meter as a matched set. The probe end has a custom mounting block that is compatible with most dissolution instruments.

Universal Level (LEVEL-UN) The bath needs to be level to ensure the shafts are not stirring at an angle, and are vertical.

The certified level is a simple, round spirit level that allows quick and easy verification of the level in all directions at once. The spirit level is 38mm in diameter and has a height of 13mm, making it perfect for placing in small spaces. Ideally, it should be used on the base plate of the tester to ensure that the vessels are level.

Verticality meter (VERTMET-MI) The Digital Verticality Meter provides an immediate digital reading of any angle in a full circle and is suitable for measuring the shaft verticality required for the ASTM test. The machined aluminium frame is rigid and light with a precise platform that allows the sensor and its microprocessor circuit to provide height accuracy throughout the entire 360° range. The meter is suitable for any "open" dissolution baths where you can access the vessels when the bath is working.

This tool requires calibrating before each use (similar to a "zero") and for this reason is not supplied with a calibration certificate.

Depth Setting Tools (DEPSET-MI and DEPGAG-VK) Labhut offer two different tools for setting the height of the basket/paddle (use the DDAPT to measure the height). The DEPSET-MI consists of a metal rod with a 25mm PTFE ball fixed to the end, and the DEPGAG-VK is a metal spacer that works in the same way. Both are compatible with all open-top baths.

To set the correct depth, simply place the gauge at the bottom of the vessel, lower the paddle or basket until it touches the spacer and fix the shaft in position.

Depth Measuring Gauge (DDAPT) The new Digital Depth Gauge Assembly has been developed to offer an accurate and easy to read digital measurement for the spacing between the bottom of the vessel and the stirrer. This allows paddle or basket placement to be determined within 0.01mm.

The DDAPT digital depth gauge is made to fit most popular open access dissolution baths, including most from Hanson (the Vision series requires a separate gauge), VanKel and Distek.

Optical Tachometer (TACHOM-UN) The most accurate method of measuring the rotational speed is by using an optical tachometer. A reflective sticker is placed on the shaft or shaft drive, the optical tachometer shines an infrared light on to the shaft at this point. The reflection is then measured at every rotation, giving an accurate reading of the rotational speed. The tachometer can be used on all dissolution baths.

Center Gauge (CNTGAG-MI) The Centering Gauge uses a surrogate shaft that fits directly into the shaft drive. This removes the chance of the reading being affected by a bent shaft. The PTFE coated lever is lowered into the vessel, approximately half way down, this is important because of variations in the glass at the top of the vessel. The shaft is rotated slowly and the lever moves around the inside of the vessel. Deviation from the centre position can then be read on the dial, which always faces forwards.

The gauge works on most open access baths. Two different shaft diameters are used (10mm and 3/8" for metric and imperial shaft sizes respectively). For bathless systems where the shaft cannot easily be removed, the indicator fits directly on to the bottom of the shaft once the blade or paddle hub is removed.

Calibrated Thermometer (THERMD-LC) The calibrated digital thermometer is an extremely accurate thermistor-based low cost thermometer. It is ideal for validating dissolution bath and media temperature as well as general lab use.

A simple switch lets you set the digital display to show either Celsius or Fahrenheit readings. The Thermometer is supplied with a certificate of calibration

Validation Tool Kits (VALTOL-KT2 & VALTOL-ASTM) Our validation tool kits contain everything necessary to make a complete calibration of a dissolution bath. The VALTOL-KT2 standard tool kit contains a Centering Gauge, Precision Level, Wobble meter, Go/No Go Gauge (this is used to verify that the height is more than 23mm but less than 27mm) and a Depth Set Tool.

The VALTOL-ASTM Tool Kit is the same as the KT2 kit but also includes the verticality meter. Both kits contain full instructions together with individual certificates of calibration.

Calibration Tools

Calibration Tools

Part No.	Description	OEM ref
CNTGAG-MI	Multi-Instrument Vessel Centering Gauge	–
DDAPT	Depth Measuring Gauge	–
DEPGAG-VK	Depth Set Gauge, VanKel Style	12-7300 V
DEPSET-MI	Ball Style Depth Set Gauge	–
DEPSET-SB	Stationary Basket Spacer, 1cm	–
DPSPBK-VK	Basket Height Spacer	12-7210 V
DPSPPD-VK	Paddle Height Spacer	12-7200 V
LEVEL-UN	Universal Precision Spirit Level	–
TACHOM-UN	Optical Tachometer	–
THERMD-LC	Calibrated Digital Thermometer	–
VALTOL-KT2	Validation Toolkit (centering gauge, depth set gauge, level, wobble meter)	–
VALTOL-ASTM	Validation Toolkit (as above plus verticality meter)	–
VERTMET-MI	Verticality Meter	–
VIBMET-UN	Vibration Meter with probe and case	–
WOBMET-MI	Wobble Meter (including vessel cover and brackets) for all open top baths	–

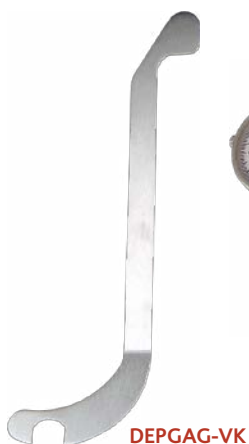


VALTOL-KT

V VanKel



VIBMET-UN



DEPGAG-VK



WOBMET-MI



CNTGAG-MI



THERMD-LC



DEPSET-SB



DPSPBK-VK



DPSPPD-VK



VERTMET-MI



LEVEL-UN



DEPSET-MI



TACHOM-UN

Re-calibration recommended on an annual basis.
Contact : sales@labhut.com for a quotation

Glass Accessories

Volumetric Flasks

Part No.	Description	OEM ref
VOLFLK-05	500ml Volumetric Flask, Class A, Calibrated at 20°C	—
VOLFLK-09	900ml Volumetric Flask, Class A, Calibrated at 20°C	—
VOLFLK-1K	1000ml Volumetric Flask, Class A, Calibrated at 20°C	—
VOLFLK-X5	500ml Volumetric Flask, Class A, Calibrated at 37°C	—
VOLFLK-X9	900ml Volumetric Flask, Class A, Calibrated at 37°C	—
VOLFLK-X1	1000ml Volumetric Flask, Class A, Calibrated at 37°C	—

Flasks have two markings: TD/TC : To Deliver and To Contain



VOLFLK-05

VOLFLK-X9

VOLFLK-X1

Tapped Density

Part No.	Description	OEM ref
GLA010-01	10ml Tap Density Cylinder	52-5000
GLA100-01	100ml Funnel Top Cylinder, Graduated, Hexagonal Base	52-5010 V
GLA1CA-01	100ml Funnel Top Cylinder, Graduated, Hexagonal Base, Class A, Calibrated at 20°C	—
GLA250-01	250ml Funnel Top Cylinder, Graduated, Hexagonal Base	52-5020 V



GLA100-01

GLA1CA-01

GLA250-01

Rotating Bottle Apparatus

Part No.	Description	OEM ref
RBAASSY-01	100ml Clear Glass Bottle and Cap, Viton Liner	—
RBAASSY-02	100ml Clear Glass Bottle and Decant Cap, 40 Mesh Screen	—
RBSCRN-40	40 Mesh Screen for 100ml Decant Cap	32-1220 V



RBAASSY-01

RBAASSY-02

RBSCRN-40

Misc Glass Accessories

Part No.	Description	OEM ref
FLEAK-150	100ml Glass Fleaker	—
FLEAK-300	300ml Glass Fleaker	—
GLATUB-A/ 25x150mm	50ml Amber Outer Media Tube for 12 Valve APP 7	27-5160 V



FLEAK-150

FLEAK-300

GLATUB-A/
25X150MM

Intrinsic Dissolution

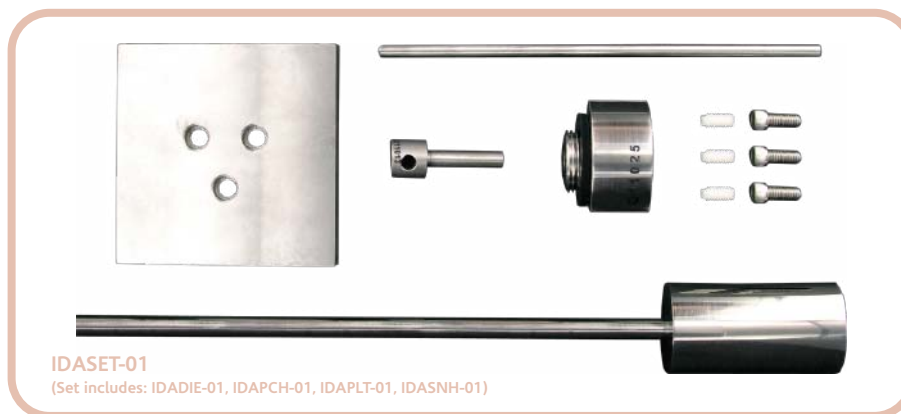
“Wood Apparatus Design”

The Intrinsic Dissolution Apparatus below is based on the conventional “Wood Apparatus Design”. This industry standard configuration has a long and successful history and is available for most dissolution baths.

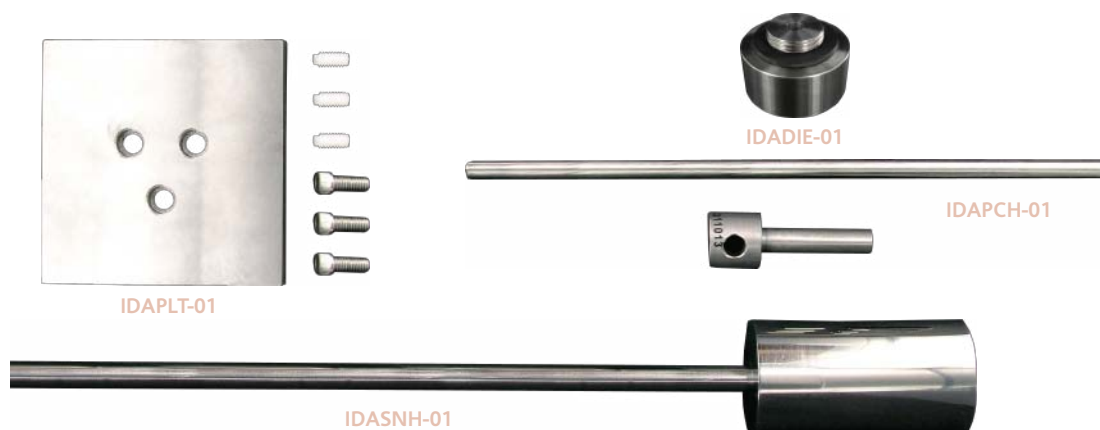
This design uses standard dissolution vessels and provides better centering and easier dosage placement than competing designs.

Intrinsic Dissolution Apparatus

Part No.	Description	OEM ref
IDASET-01	Intrinsic Dissolution Apparatus Set	– 95-590-201 
IDASET-EW	Intrinsic Dissolution Apparatus Set for Erweka	–
IDADIE-01	8mm Intrinsic Die with Gasket, 316 Stainless Steel	12-4120  95-590-204 
IDAPCH-01	8mm Punch and Handle	12-4140  95-590-203 
IDAPLT-01	Surface Plate with Screws	12-4130  95-590-205 
IDASNH-01	Shaft and Holder, 316 Stainless Steel	12-4150  95-590-202 



IDASET-01
(Set includes: IDADIE-01, IDAPCH-01, IDAPLT-01, IDASNH-01)



Disintegration

VanKel Disintegration Accessories

Part No.	Description	OEM ref
DISASY-06	Basket Assembly with 6 Glass Tubes and 10 Mesh Stainless Steel Screens, for VanKel	37-2001
DISASY-P6	Basket Assembly with 6 Plastic Tubes and 10 Mesh Stainless Steel Screens, for VanKel	–
DISTUB-06	Glass Disintegration Tubes for 6 Tube Assembly	37-5000
DISTUB-P6	Plastic Disintegration Tubes for 6 Tube Assembly–	
FDISK-VK	Fluted Plastic Disc for 6 Tube Assembly	37-4000
GLA900-DB	900ml Disintegration Beaker, Flared Top	37-5200
GLA905-DB	900ml Disintegration Beaker, Flat Top	37-5305



DISASY-06 / DISASY-P6



DISTUB-06



DISTUB-P6



FDISK-VK



GLA900-DB



GLA905-DB

Caliper Lifesciences (Zymark)

Zymark Compatible Baskets

Part No.	Description	OEM ref
BSK040-ZM	40 Mesh Stainless Steel Basket	63127
BSK040-ZM2	40 Mesh Precision Length Stainless Steel Basket	–

Precision Length Basket

The Precision Length Basket (BSK040-ZM2) is specifically designed for use with Caliper Multidose and other robotic dissolution systems. It has a long usable life in the demanding robotic environment.



BSK040-ZM/
BSK040-ZM2

Zymark Compatible Basket Shafts

Part No.	Description	OEM ref
BSKSHT-ZM2	15" (380mm) Double O-Ring Style Conical Basket Shaft	–
BSKSKT19 - ZM2	19" Custom O-Ring Style Conical Basket Shaft	–

Spin On/Off

The double O-ring conical basket shaft is also available as a Spin ON/OFF shaft. See SPNBSK-ZM2 on page 9.



BSKSHT-ZM2

Zymark Compatible Vessels

Part No.	Description	OEM ref
GLA9CR-ZM	1000ml Clear Glass Vessel with Centering Ring	58730
CNTRNG-ZM	Multidose Centering Ring	69606



GLA9CR-ZM



CNTRNG-ZM

Zymark Miscellaneous

Part No.	Description	OEM ref
ADTPIN-ZM	Multidose Adapter Pin	48481
LOCPIN-ZM	Multidose Locator Pin	48479
RETRNG-ZM	Multidose Vessel Retainer	–



RETRNG-ZM

Misc Accessories

Tubing

Part No.	Description	OEM ref
PPTUBV-01	Peristaltic Pump Tubing, Santoprene, Coded Purple & White (Set of 8)	17-6000 V
PPTUBV-02	Peristaltic Pump Tubing, Silicone, Coded Purple & White (Set of 8)	17-6010 V
PPTUBD-01	Peristaltic Pump Tubing, Santoprene (Set of 6)	5640-0337 D
TAATUB-HP	3 Collar Tygon Auto Analyser Tubing, 0.08" (2.06mm) ID (Set of 12)	5041-2166 D
TEFTUB-HP	FEP PTFE Tubing for HP 1/32" (0.8mm) ID x 1/16" (1.6mm) OD, 500' (152m) Roll	—
TEFTUB-8V	Colour Coded Sample PTFE Tubing, 0.42" (10.67mm) ID x 0.066" (1.68mm) OD, 8 Lengths of 50' (15m)	17-6035 V
TUBING	Tygon Tubing, 1/16" (1.6mm) x 1/8" (3.2mm) (Sold by Foot)	—



TEFTUB-8V



PPTUBV-01



PPTUBV-02



PPTUBD-02



TAATUB-HP



TEFTUB-HP

D Distek
V VanKel



TUBING

Paper Rolls

Part No.	Description	OEM ref
PAP100-01	Plain Paper Rolls for Report Center II, 2.25" (57mm) Wide (Pack of 25)	12-9995 V
TPP100-01	Thermal Paper Rolls (Pack of 25)	12-9994 V



PAP100-01



TPP100-01

Glass Syringes

Part No.	Description	OEM ref
SYR020-01	20cc Glass Syringe	12-3230 V



SYR020-01

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0810009	GLA900-AC	17
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0810021	BSK020-CA	5
0810097	FIL040-CA-100	23
0810098	FIL040-CA-1000	23
0810100	FIL001-CA-100	23
0810101	FIL001-CA-1000	23
0810103	FIL004-CA-100	23
0810104	FIL004-CA-1000	23
0810106	FIL010-CA-100	23
0810107	FIL010-CA-1000	23
0810123	BSK010-CA	5
0810142	FIL035-CA-100	23
0810143	FIL035-CA-1000	23

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80-000-1004	GLA900-AW	17
80-000-2002	GLA02K-EW	17
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90-000-0040	BSK040-EW	5

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2800-0032	BSK040-DKC	5
2800-0041	BSK010-DKC	5
2800-0042	BSK020-DKC	5
2800-0165	SHFT16.5-DK	8
2800-0178	TPD016-02	10
2821-0072	BSK040-DK	5
2821-0074	BSDRNG-16	8
2821-0097	BSDRNG-19	8
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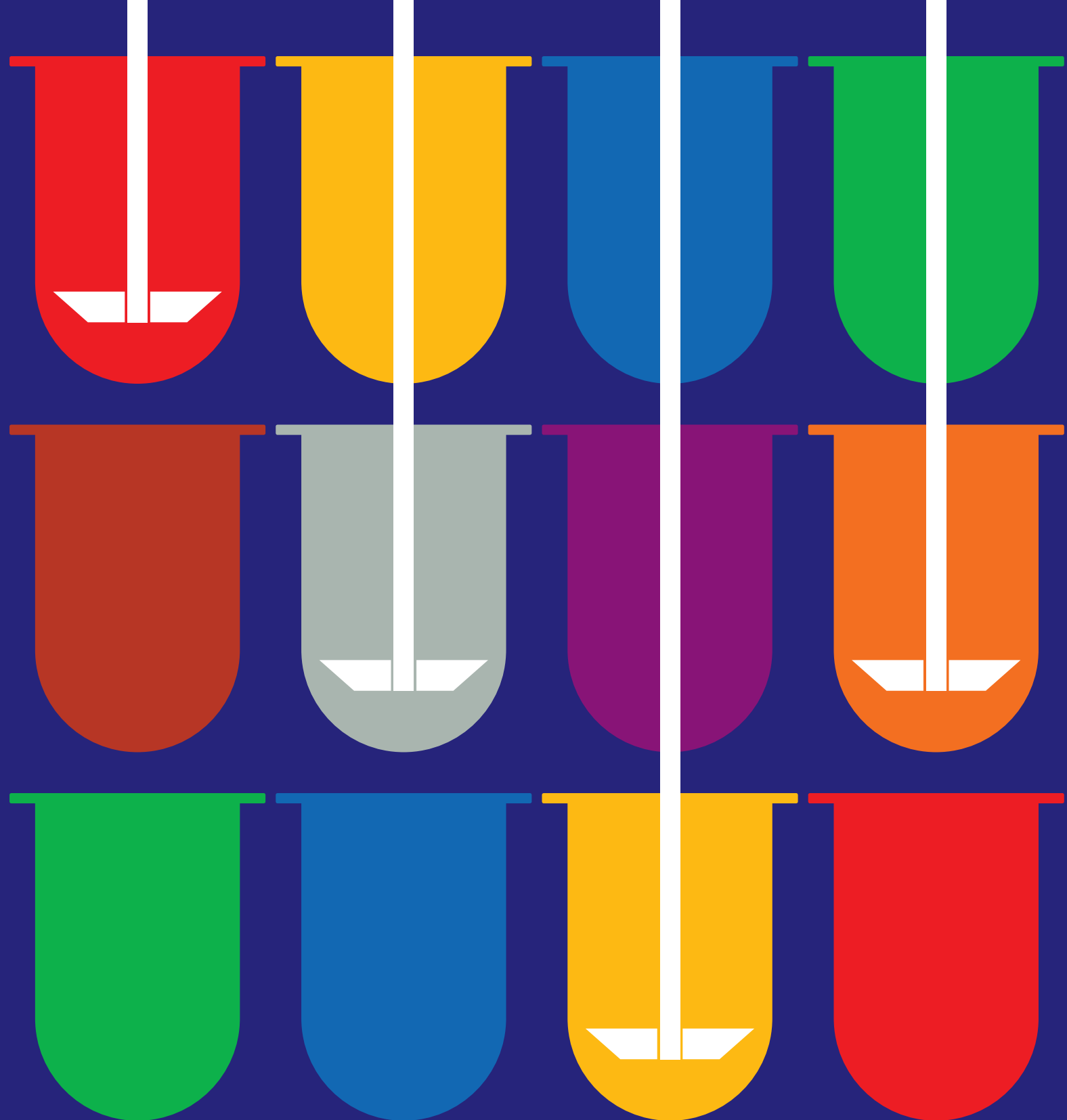
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