

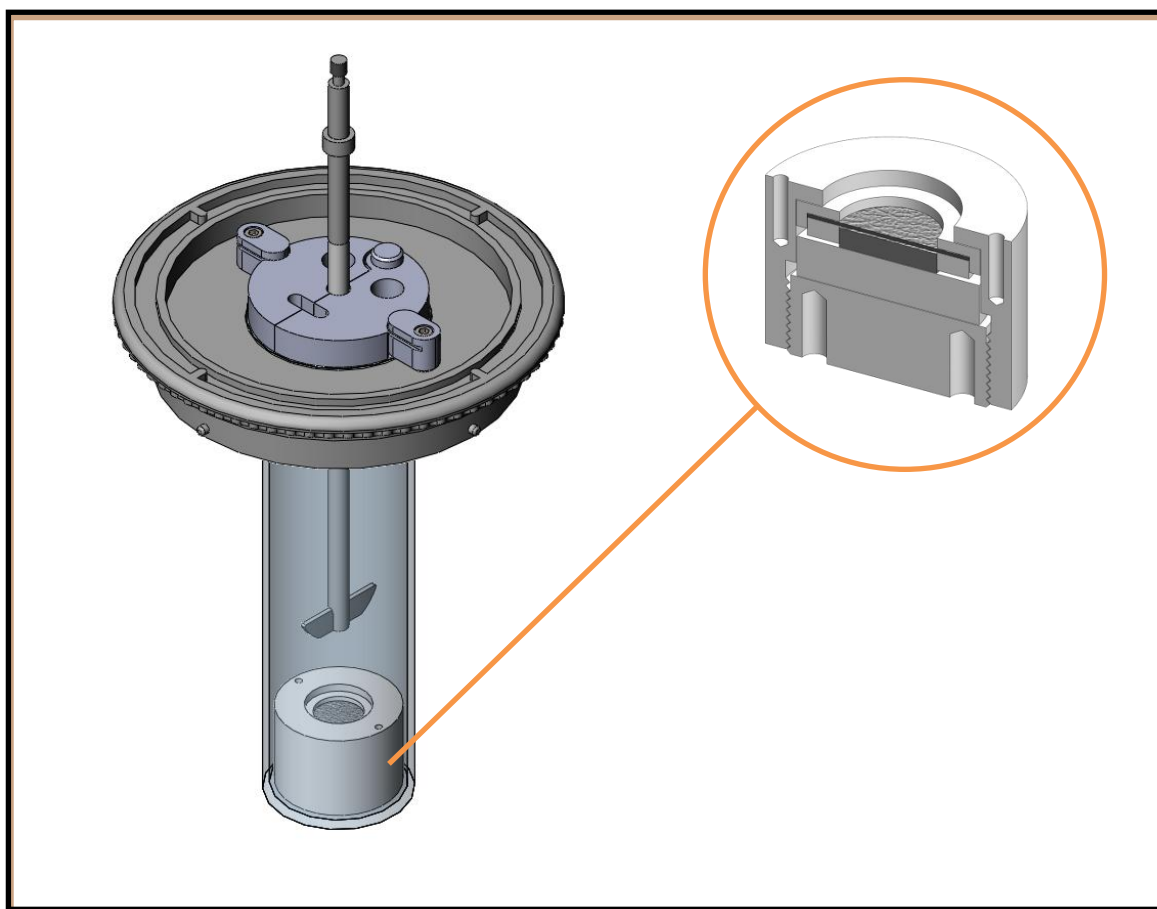
VISION® G2

Immersion Cell

(with Small Volume Vessel)

User Guide

65-190-027 Rev. C



Congratulations on the purchase of your Hanson Immersion Cell(s). While we are certain you will enjoy the Hanson experience, we also understand that from time to time you may have a question or technical issue requiring our assistance. Please feel free to contact us at any time. We're happy to help!



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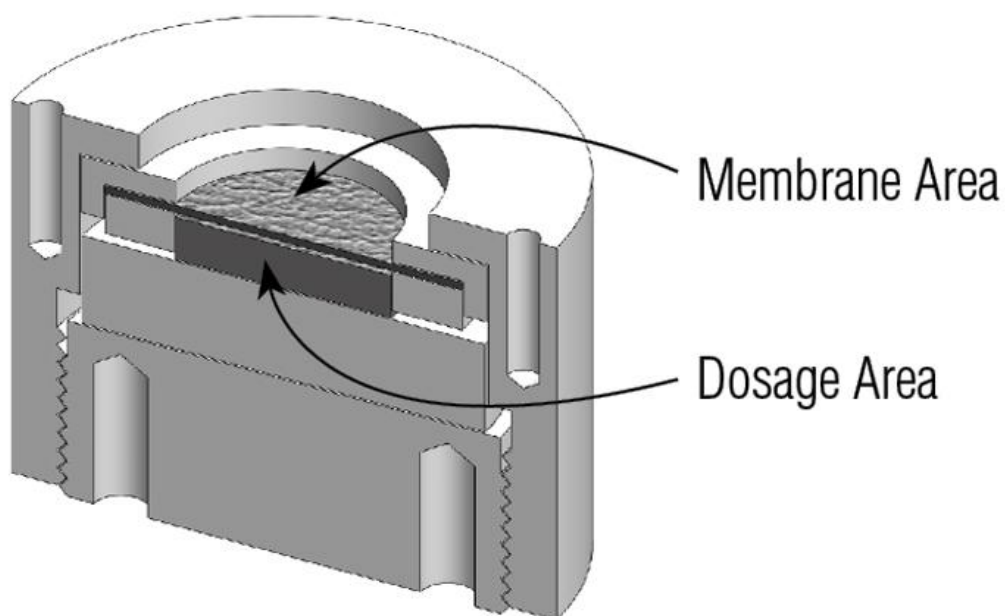
1. Introduction

1.1. The Immersion Cell

Hanson's Immersion Cell (p/n 65-190-043) with the small volume dissolution accessories, in conjunction with the SR8-Plus or Vision dissolution testers, is a test system designed for ointments, creams, lotions, etc., for quality control purposes.

The system uses a standard SR8-Plus or Vision type dissolution test system. The test is the same as standard dissolution testing, with the exception of using a small (mini) paddle and vessel, with the immersion cell inside the vessel. The testing agent is not a tablet, but an ointment. The ointment is sealed in a delivery chamber where it can only move into the solution through a membrane.

1.1.1. Immersion Cell Features



1.1.2. Immersion Cell Options

65-190-043 Immersion Cell, 15 mm (immersion cell assembly only)

65-190-051 Immersion Cell, 15 mm (one cell assembly with tools)

65-190-052 Immersion Cells, 15 mm (set/6 with tools)

1.1.3. Immersion Cell Tools

The sets with tools (65-190-051 and 65-190-052) include:

1. Support Tool
2. Hand Tool
3. Installation Rod
4. "O" Height Spacer (for use with SR8-Plus only)

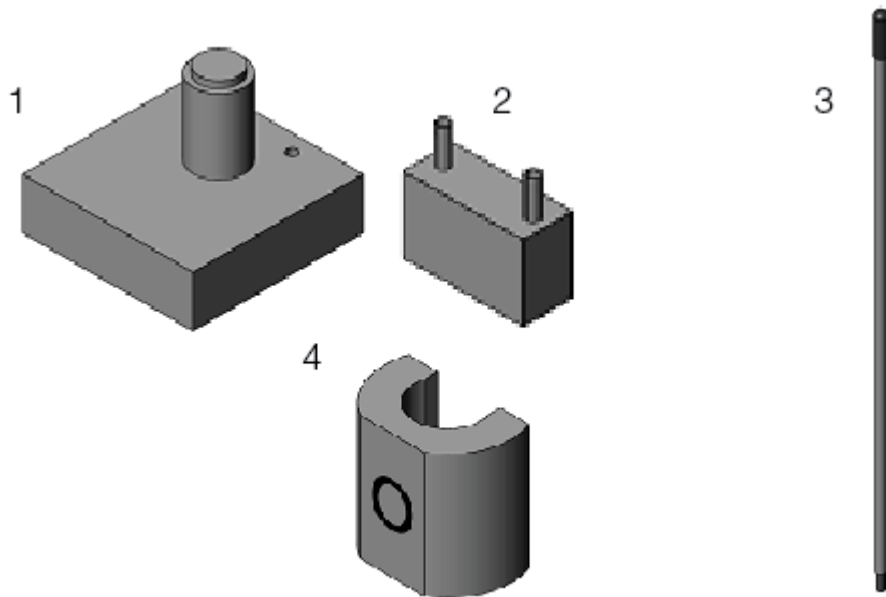


Fig. 1: Immersion Cell Tools

2. Installation

The immersion cell can be installed in the flat-bottom small volume vessel on the Hanson Vision Classic 6, Vision Elite 8, or SR8-Plus dissolution tester. As an added option, manual sampling probes can be added for sampling.

2.1. Components

The immersion cell contains several components, listed below. The membrane is sold separately, but is pictured here to illustrate position.

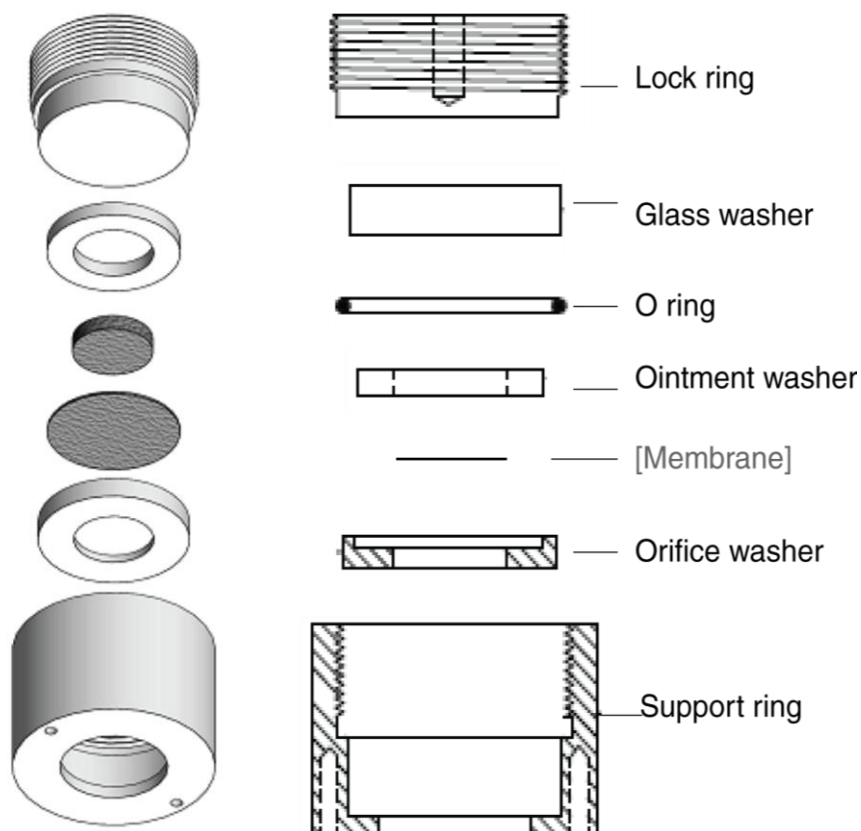


Fig. 2 Immersion Cell Components

2.2 Immersion Cell Assembly

The immersion cell must be properly assembled prior to use to ensure it functions properly. Follow the procedure below. Refer to **Fig. 1** (Immersion Cell Tools), **Fig. 2** (Immersion Cell Components), and **Fig. 3** (Assembly Diagram).

1. Orient the support ring so that it is upside down (larger opening face up).
2. Place support ring on support tool.
3. Place orifice washer on support tool; it should rest on the top part of the post.
4. Place membrane in orifice washer.

5. Place ointment washer on top of the orifice washer; the two should fit together to hold the membrane in place. Squeeze these together, making sure to keep membrane wrinkles to a minimum.
6. Apply dose to the membrane, inside the circular area in the middle of the ointment washer. Spread to evenly fill the dosage area.
7. Place O ring over washers.
8. Place glass washer on top of ointment washer and O ring.
9. Lift support ring, keeping slight pressure on glass washer.
10. Washers will move to the bottom of support ring; lift the entire assembly off the support tool, pushing down gently on the glass washer to ensure the assembly sits at the bottom of the support ring.

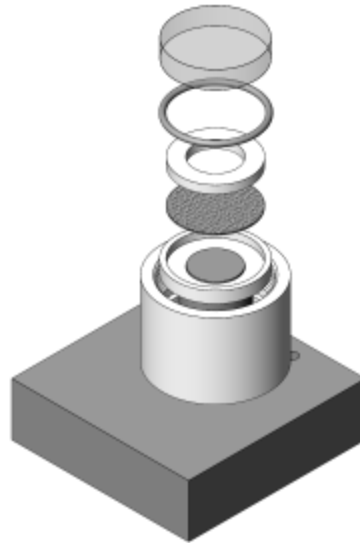


Fig. 3 Assembly Diagram

11. Place the lock ring on the support ring, with the two holes face up. Inserting the two prongs of the hand tool into the corresponding holes of the lock ring, screw the lock ring into the support ring (**Fig. 4**). It should fit snugly, but do not tighten it too much or damage to the immersion cell may result. Turn the assembly over for upright orientation.



Fig. 4

2.3 Immersion Cell Installation

1. With media in the vessels, and once the temperature is stable, loosely screw the installation rod into one of the two holes on the top of the immersion cell.
2. Lower the immersion cell slowly into the vessel (Fig. 5).
3. Unscrew the installation rod and remove from the vessel.

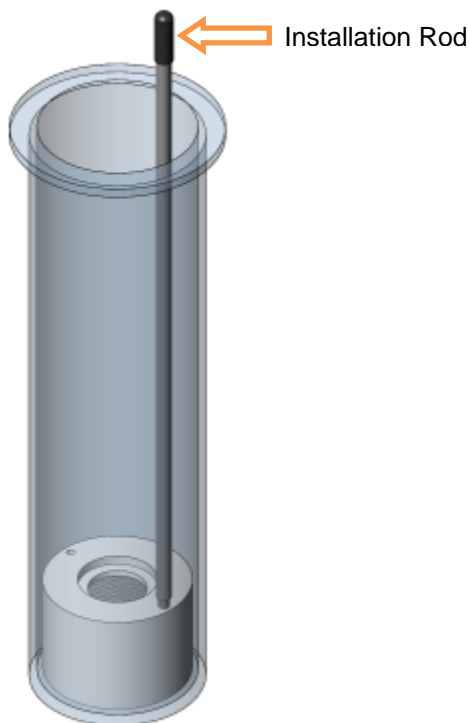


Fig. 5

2.4 Immersion Cell Removal

1. Use installation rod to remove the immersion cell from the vessel.

2.5 Installing the Immersion Cell in a Dissolution Tester

2.5.1. For Use with a Vision Elite 8 Tester

1. Raise the drive head to its highest position.
2. Remove any basket shafts or paddles already installed.
3. Install the Easi-Lock Adapter Ring (for Small Volume Vessel) into the hole where the 1L vessel would normally mount, and turn clockwise to lock into place.
4. Carefully insert the small volume vessel into the adapter ring and secure in place with the clamp knobs. Repeat steps 3-4 for each small volume vessel used.
5. Fill each vessel with desired media volume, cover the vessels, and allow the bath and media to reach desired operating temperature.

6. Install mini spin-paddles by screwing into spindle shafts; tighten securely.
7. Assemble all immersion cells, remove covers, and place each into a vessel using the installation rod. Unscrew rod and remove after placement.
8. Lower the drive head to the lowest position. The spin paddles should be about 10 mm above the immersion cell.
9. Install a vessel cover over each vessel and start test.

Note: The small volume accessories were not designed for use with the AutoMag. The AutoMag (if it is present) must be removed before installing small volume vessels on the Elite 8.

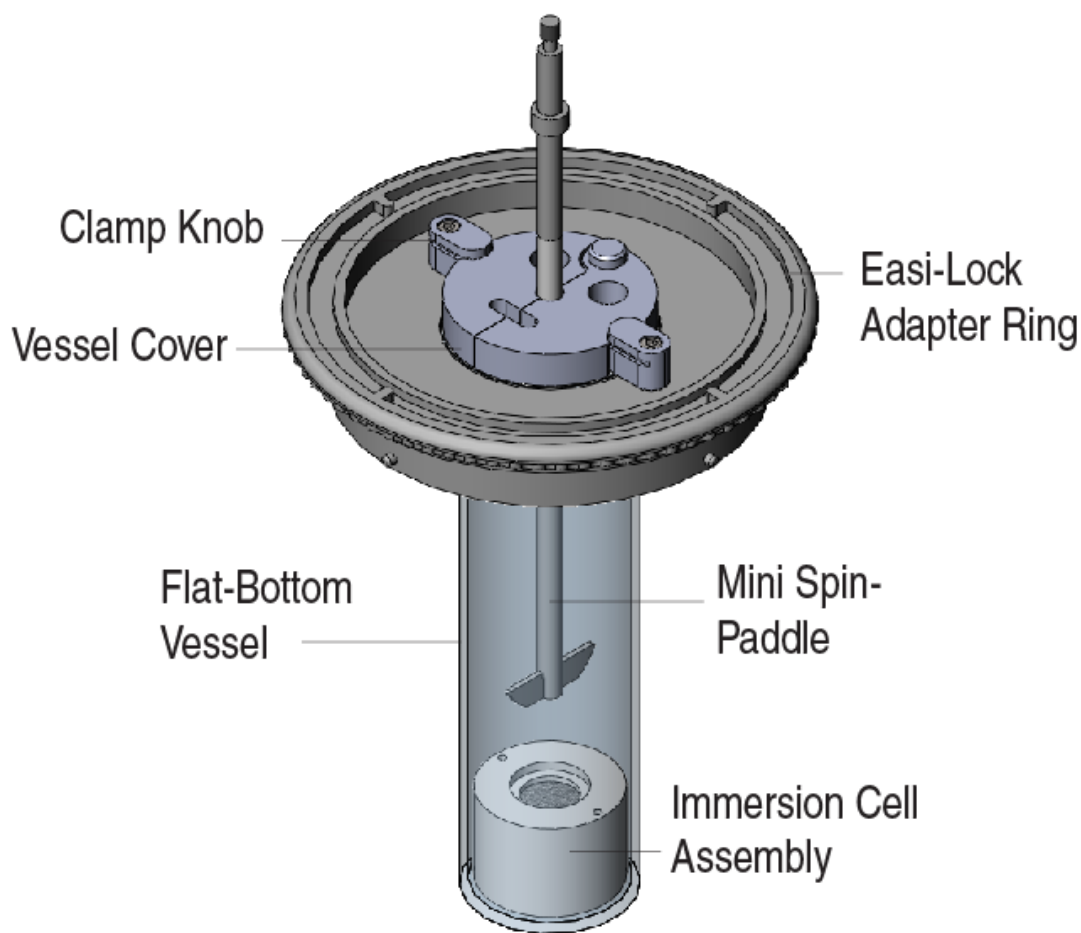


Fig. 6 Vision Configuration

2.5.2. For Use with a Vision Classic 6 Tester

1. Raise the spindle shaft to about 1" below the fixed drive head (removing any basket shafts or paddles already in place).
2. Install the Easi-Lock Adapter Ring (for Small Volume Vessel) into the hole where the 1L vessel would normally mount, and turn clockwise to lock into place.
3. Carefully insert the small volume vessel into the adapter ring and secure in place with the clamp knobs. Repeat steps 2-3 for each small volume vessel used.
4. Fill each vessel with desired media volume, cover the vessels, and allow the bath and media to reach desired operating temperature.
5. Install mini spin-paddles by screwing into spindle shafts; tighten securely.
6. Assemble all immersion cells, remove covers, and place each into a vessel using the installation rod. Unscrew rod and remove after placement.
7. Lower the mini spin-paddles to 10 mm above the immersion cell.
8. Install a vessel cover over each vessel and start test.

2.5.3. For Use with an SR8-Plus Tester

1. Raise the drive head to its highest position.
2. Install the adapter ring into the hole where the 1L vessel would normally mount, and secure with the clamp knobs on the base plate.
3. Carefully insert the small volume vessel into the adapter ring and secure in place with the clamp knobs. Repeat steps 2-3 for each small volume vessel used.
4. Install mini spin-paddles in drive head, with about 2 in. showing above the top of the drive head.
5. Adjust the paddle height:
 - a. Adjust the lock collars on each of the two guide rods to 1" above the rod mount (see Fig. 7).
 - b. Lower the drive head to its lowest position (touching the lock collars).
 - c. Lower each paddle until it touches the bottom of the vessel, then lock each paddle shaft in position.
 - d. Raise the drive head to its highest position and insert the O height spacer above the lock collar on one of the guide posts.

6. Fill the vessel with desired media and volume, and allow the bath and media to reach desired operating temperature.
7. Assemble all immersion cells, remove covers, and place each into a vessel using the installation rod. Unscrew rod and remove after placement.
8. Lower the drive head. The mini spin-paddles should be 10 mm above the immersion cell.
9. Install a vessel cover over each vessel and start test.

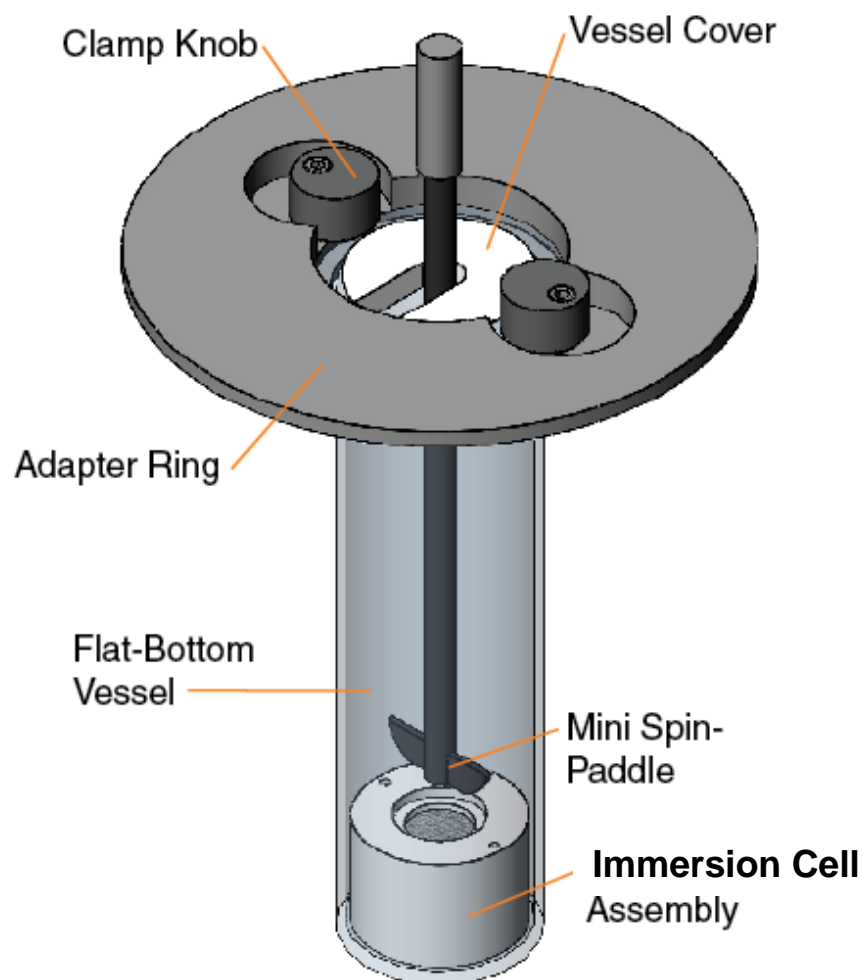


Fig. 7 SR8-Plus Configuration

3. Accessory Options

Recommended:

91-030-062 Membranes, 25 mm diameter x0.45 micron (100/pk)

Also available for Vision Dissolution Testers:

74-105-152 Flat Bottom Vessel

74-105-203 Mini Spin-Paddle, PTFE Coated, or

74-105-204 Mini Spin-Paddle, 316 Stainless Steel

74-104-163 Vessel Cover

74-104-155 Easi-Lock Adapter Ring (for Small Volume Vessel)

74-104-211 Fixed Vessel-Mount Sample Probe, Adjustable, 1/16 in., 316 SS (for automated sampling), or

74-104-201 Manual Sampling Cannula, 1/8 in., PEEK (for manual sampling)

Also available for SR8-Plus Dissolution Test Station:

72-800-721 Small Volume Dissolution Kit, Flat Bottom includes:

Mini-Paddle (PVDF)

150mL Flat Bottom Vessel

Vessel Cover

Vessel Adapter Ring

72-800-722 Small Volume Dissolution Kits, Flat Bottom (Set/6)

72-800-714 Vessel Adapter Kit (adapter ring with clamp knobs only)

72-300-232 Manual Sampling Cannula (for manual sampling)

4. Specifications

Immersion Cell	
Wetted Materials:	Teflon, borosilicate glass, Viton
Size:	Orifice Area: 15 mm
	Dosage Area: 3 mm deep x 15 mm diameter
	Membrane (not included): 25 mm diameter
Ointment Capacity:	0.53 mL
Small Volume Vessel	
Wetted Materials:	Borosilicate glass
Vessel Capacity:	150 mL

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