

## Small Volume Dissolution

### Provided to Help You Get the Most from Your Agilent Dissolution Products!

While typical dissolution testing is performed with standard USP Apparatus 1 (baskets) and 2 (paddles) at 500 – 900 mL, at times the dosage form requires some variation from these parameters. Often, due to product or release characteristics, the media volume is altered to achieve the necessary concentration level within the vessel.



The 708-DS makes conversion to a smaller volume simple. A conversion kit for each location includes an adapter ring and evaporation cover. If the system is automated, the manifold is easily adjusted to accommodate the smaller vessel size. Mini TruAlign vessels (100, 200, or 250 mL) and mini-basket or paddle shafts complete the conversion. The 100 mL vessel allows for dissolution in as little as 50 mL.

SEE SHORT VIDEO OF VESSEL CONVERSION [HERE!](#)

The Apparatus 3 (BIO-DIS) and Apparatus 7 models can also support smaller volume testing. These units provide an easy mechanism to move the dosage form to fresh or different medium when necessary.

For some applications – especially combination products or **medical devices** – an even smaller volume is required. The 400-DS provides an integrated system that can perform dissolution in as little as 3 mL and has sample holders for many applications.

The following table summarizes the volumes available for the Agilent models:

Model	USP Apparatus	Vessel Volume (mL)
708-DS	1, 2, 5, 6	100, 200, 250 (CP), 1000, 2000
Recip. Cylinder (BIO-DIS)	3	100, 300, 1000
Reciprocating Holder	7	50, 100, 300
400-DS	7	5, 10

Topical formulations – such as gels, creams, and ointments – can also utilize smaller volumes for evaluation. The 708-DS easily accommodates a 200 mL flat-bottomed vessel and the Enhancer (Immersion) Cell for this type of testing.

SEE COMPLETE ENHANCER CELL TUTORIAL [HERE!](#)

**708-DS Small Volume Accessories & Conversion Kits**

<b>Description</b>	<b>Part No.</b>
TruAlign vessel, 100 mL	12-5145
TruAlign vessel, low actinic - red, 100 mL	12-5146
TruAlign vessel, 200 mL	12-5147
TruAlign vessel, low actinic - red, 200 mL	12-5148
TruAlign vessel, 250 mL, for Chinese Pharmacopeia	12-1452
Basket, mini, 40-mesh	12-2102
Mini basket shaft, lower interchangeable, stainless steel, O-ring	13-3636
Mini paddle, lower interchangeable, PTFE-coated	13-3607
Mini paddle, lower interchangeable, stainless steel	13-3608
TruAlign vessel 100/200 mL conversion kit (includes vessel adapter and evaporation cover)	12-6368
TruAlign vessel, 250 mL conversion kit, for Chinese Pharmacopeia (includes vessel, adapter, two-piece mini paddle, evaporation cover and manifold adapter), set of 6	12-1450
TruAlign vessel, 250 mL conversion kit, for Chinese Pharmacopeia (includes vessel, adapter, two-piece mini paddle, evaporation cover and manifold adapter), set of 8	12-1451

**400-DS (Small Volume Apparatus 7) publications:**

- [Development and evaluation of accelerated drug release testing methods for a matrix-type intravaginal ring](#)
- [Investigating the in-vitro release properties of injectable suspension from a drug-eluting balloon-like spacer for paranasal sinusitis](#)
- [In vitro evaluation of a sirolimus-eluting stent using different release test methods](#)

## Agilent Sites and Services for Your Dissolution Workflow



Agilent Dissolution Systems Digital Source Book

[www.nxtbook.com/nxtbooks/agilent/dissolution\\_sourcebook/index.php](http://www.nxtbook.com/nxtbooks/agilent/dissolution_sourcebook/index.php)

Dissolution Exchange

[www.dissolution.chem.agilent.com](http://www.dissolution.chem.agilent.com)

Dissolution 1-on-1 Training

[www.dissolution.chem.agilent.com/learndissolution-1-on-1](http://www.dissolution.chem.agilent.com/learndissolution-1-on-1)

Dissolution Hotline (Email Address)

[dissolution.hotline@agilent.com](mailto:dissolution.hotline@agilent.com)

Dissolution Discussion Group (DDG)

[www.dissolution.com](http://www.dissolution.com)