

# 709-DS Dissolution Apparatus

## Frequently Asked Questions

# Bath-free 709-DS and DVH Vessels

## Key features:

- Uses Direct Vessel Heating (DVH) technology to precisely control the temperature of each dissolution vessel.
- Heating elements and temperature sensors are deposited directly onto each vessel providing an unobstructed view of the dissolution process.

The following Questions and Answers are related to Agilent's 709-DS with DVH technology.

# Q: The 709-DS model is less popular versus the 708-DS and has no user references available. Can you confirm this?

A: Yes and no.

It is correct that Agilent's 708-DS Dissolution Apparatus sells more frequently than the 709-DS. This is not debatable, as the water bath version is much more popular in the dissolution industry.

However, for those customers who prefer to avoid periodically cleaning the water bath and faster vessel heat-up times, the 709-DS provides a valuable option.

There are Agilent partners worldwide using this model with great success – and, although we cannot publicly disclose these names, references can certainly be provided upon specific request.

# Q: Why did Agilent (previously Varian) withdraw their previous bath-free model from the market?

A: The 7030 bath-free model was taken off the market as part of Agilent's streamlining initiative conducted after the Varian acquisition.

This model – as well as the 7000, 7010, 7025 and 705-DS – was discontinued to allow Agilent to focus on the remaining models, the 708-DS and 709-DS, which continue to be popular today.

## Q: Why is the 709-DS DVH vessel so expensive compared to the standard dissolution vessel?

A. The proprietary technology used to manufacture the DVH vessel adds cost to this accessory.

A benefit to this vessel is that a clear, protective coating is applied to the outer vessel that acts to prevent breakage. This, coupled with a plastic collar, helps to limit replacement vessels.

**Q: How reliable are the electrical connections where the DVH vessel is installed on the vessel plate? Are there electrical concerns when working with dissolution medium at an elevated temperature?**

A: The vessel connections are encased in a large sliding switch that completely conceals them. There is no risk or danger on or near this connection. The pins themselves are also protected. The DVH vessel may be washed in the same manner as a traditional glass vessel. Note that additional drying may be required if an automated washer is used.

## Q: Is it true that the 709-DS will not operate if one vessel is missing?

A: Any number of dissolution vessels (n=1 to n=8) may be configured on the 709-DS to perform a dissolution test. This setting is programmed from the color touch screen of the unit itself.

For broken vessels – although highly unlikely – the same procedure would apply with a traditional glass vessel. The instrument would typically be out of service until re-qualified with a new vessel.

## Q: Can the DVH vessel be positioned in any configuration (360°) in the vessel plate?

A. No. The vessel connection prohibits rotation and only one orientation is possible. However, the vessel contains an alignment ring that virtually guarantees centering in compliance with the tightest specifications ( $\leq 1.0$  mm) in relation to the shaft. Vessel rotation within the vessel plate is not required.



## Q: Do the environmental chambers limit visibility to the dissolution vessel?

A: No. The chambers – available in clear or low-actinic (red) versions for light-sensitive products – work to shield the vessel from external environmental conditions.

A mirror is also placed in the bottom of each chamber to provide an additional view of the vessel bottom which is optically hidden due to refraction.

## **Q: Should I use the 3-fin baskets provided with the 709-DS for my basket tests? Do I need to re-validate all my basket (USP Apparatus 1) methods?**

A. No. The 3-fin baskets are to be used only during the preheat cycle that is performed before each test. These baskets provide greater agitation in order to accelerate the heat up and stabilization time for each vessel. Paddles may also be used for this cycle. When the vessels have stabilized at the desired temperature, the specialized baskets are removed and the user is prompted to install the standard basket.