Minimize Paddle Damage—and the Need for Replacement

Agilent DLC-coated paddle for Dissolution Apparatus 2

A new innovative coating technology overcomes the problems associated with PTFE and current dissolution paddles

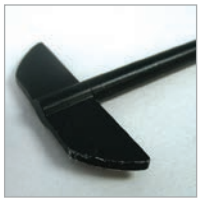
Apparatus 2 (paddle) is the most common USP apparatus for dissolution methods. Several paddle materials are available, and the material you choose will depend upon the characteristics of your dissolution media and/or dosage form.

USP states in Dissolution <711> that the paddle blade and shaft must be metallic, suitably inert, or coated with an inert material. Stainless steel is the most commonly used material, followed by PTFE-coated and PEEK. Each type has its advantages and drawbacks:

- **Metallic paddles** (stainless steel) are robust, but are susceptible to corrosion and can be incompatible with some active pharmaceutical ingredients (API).
- **PTFE coatings** prevent API adsorption effects, but are less robust, due to their tendency to scratch or peel.
- **PEEK paddles** are chemically resistant, but are expensive and tend to break or bend.

Common problems with stainless steel and PTFE-coated paddles

Rusted stainless steel paddle



Slightly worn PTFE paddle

Badly damaged PTFE-coated paddle

Damaged PTFE-coated paddle

A new coated paddle resists rust, wear, and other damage

The latest addition to the Agilent line of dissolution paddles features an inert, metal-free surface coated with diamond-like carbon (DLC). This thin, homogenous coating significantly improves robustness against scratching, decoating, and corrosion—and meets all USP specifications for Apparatus 2 paddles.

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Ordering and compatibility information

Paddles that feature the new nonreactive DLC coating are available for the Agilent 708-DS Dissolution Apparatus. Their proven spin on/off connection design is compatible with existing upper receptor shafts. All paddles and shafts include a detailed Certificate of Conformance (COC), which simplifies mechanical qualification with the Agilent 280-DS mechanical qualification system.

Description	Part Number
DLC-coated paddle, spin on/off, 1L	14-3609
DLC-coated paddle, spin on/off, 1L, set of 6	16-3609

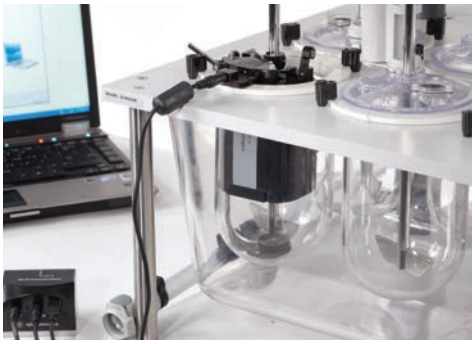
14-3609

Other Agilent Dissolution supplies that are compatible with the new DLC-coated paddle

Description	Part Number
Upper receptor shaft, E-polished, 14.75 inch (21 inch total)	14-3613
Upper receptor shaft, E-polished, 14.75 inch (21 inch total), set of 6	16-3613
TruAlign vessel, clear glass, 1L, for 708-DS	12-5149
TruAlign vessel, clear glass, 1L, for 708-DS with COC	12-5149V
TruAlign vessel, amber, 1L, for 708-DS	12-5152
TruAlign vessel, amber, 1L, for 708-DS with COC	12-5152V
280-DS mechanical qualification system	G7980AA

12-5152

12-5149V



G7980AA

To see the full list of commonly ordered supplies and parts for the Agilent 708-DS Dissolution Apparatus, download the quick reference guide.
www.agilent.com/chem/dissolution-qrg

Learn more about the dissolution instruments and accessories.
www.agilent.com/en/product/dissolution-testing

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