

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.

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

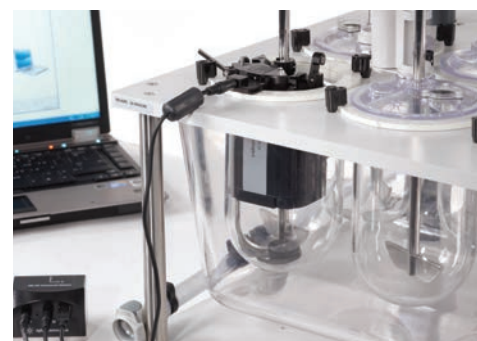
| Description | Part Number |
|--|-------------|
| Upper receptor shaft, E-polished, 14.75 inch (21 inch total) | 14-3613 |
| Upper receptor shaft, E-polished, 14.75 inch (21 inch total), set of 6 | 16-3613 |
| TruAlign vessel, clear glass, 1L, for 708-DS | 12-5149 |
| TruAlign vessel, clear glass, 1L, 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