



DATA SHEET

BIO-DIS Reciprocating Cylinder Apparatus

The BIO-DIS Reciprocating Cylinder Apparatus is ideal for automatic dissolution profiling of extended release dosage forms requiring USP Apparatus 3 and EP reciprocating cylinder testing.



Key Benefits

- ▶ **Biorelevant.** Simulate gastrointestinal conditions with simple programming that allows in vitro dissolution pH profiling with biorelevant agitation rates and retention times.
- ▶ **Compliant.** Be confident knowing the BIO-DIS is compliant with the reciprocating cylinder apparatus, USP Apparatus 3 and EP harmonized specifications.
- ▶ **Flexible.** Use one instrument to test and transport a variety of samples, saving valuable bench space. Samples are automatically transported from one medium to the next without operator intervention.
- ▶ **Easily configured.** Select a standard volumetric reciprocating cylinder option or small and large volume configuration to meet testing needs for low dose or poorly soluble formulations.



Agilent's **BIO-DIS Reciprocating Cylinder Apparatus** for USP Apparatus 3 is ideal for extended release products or any dosage form requiring release profiling at multiple pH levels. Capable of running unattended for periods of up to six days, the unit can store up to 15 programs. The BIO-DIS allows almost any aspect of a test to be programmed including agitation speed, time in each row, hold dip time, and drain time.

Operation

The seven sample inner tubes can sequentially traverse the six rows of corresponding outer tubes as programmed. The outer tubes are filled with media and the BIO-DIS transports each sample contained in the reciprocating cylinders from one medium to the next automatically, eliminating operator intervention. A second row of sample tube holders can be added for greater capacity—to run two tests in one BIO-DIS apparatus.

Most extended release solid dosage forms can be accommodated including pellets, tablets, and capsules. Mesh screens retain the samples in the tubes as they move from row to row. Custom units with more rows are available.

Other than the compendial 300 mL configuration, the apparatus is optionally available with 100 mL outer tubes and corresponding smaller inner tubes, as well as 20-mesh basket which may be used with an adapter. For poorly soluble or bolus formulations, optional 1000 mL conversion kits are available.

Reporting

The built-in printer provides hard-copy documentation of testing progress and conditions. Additionally, the digital display on the testing station provides updated operation information as the test progresses.

Optional Temperature Control

Maintain temperature with the optional 750D Heater/Circulator. All parameters for the circulator are controlled by the BIO-DIS and entered from the front panel keypad.

Automated Sampling

Easily perform automated sampling by integrating the 8000 Dissolution Sampling Station. This autosampling station may be configured to withdraw samples using either a peristaltic or syringe pump. The samples are withdrawn from the BIO-DIS at designated timepoints and placed in test tubes or pre-capped HPLC vials. Automated filtering of the sample is now available with the 808 Filter Changer, when used with the 806 Syringe Pump.

Accessories

The standard seven-tube system includes the following items:

- 3 - outer media tube vessel carriers, 14-position
- 7 - inner sample tubes with upper and lower caps
- 1 - sample kit of polypropylene and stainless steel screens
- 42 - outer media tubes, 300 mL (USP)
- 1 - 750D External Heater/Circulator

BIO-DIS Specifications

Altitude	0 - 2000 m (0 - 6562')
Temperature	5 to 40 °C
Humidity (%RH) non-condensing	Not more than 80
Voltage requirements	115 V / 60 Hz 230 V / 50 Hz
Current requirements	115 V—2.0 Amp 230 V—2.0 Amp
Fuse requirements	115 V—2.0 Amp, 250 V, 5 mm x 20 mm FAST 230 V—2.0 Amp, 250 V, 5 mm x 20 mm FAST
Minimum dips per minute	5
Maximum dips per minute	60
Stroke length	10.0 ± 0.1 cm
Water bath temperature	Ambient + 5 to 55 °C
Number of rows	Standard 100 / 300 mL versions—6 rows of 7 tubes 1L version—3 rows of 3 tubes Dual dipping rows available
Cap size	Standard USP Type—3.4925 cm (1.375 in.) diameter Agilent Type—4.318 cm (1.700 in.) diameter
Run time display format	hhh:mm programmable up to 999:59
Dip time interval display format	hhh:mm programmable up to 999:59
Drain time display format	mm:ss programmable up to 99:59
Hold dip time display format	mm:ss programmable up to 99:59
Printer	Impact
Dimensions	Height: 73.66 cm (29 in.) Width: 68.58 cm (27 in.) Depth: 69.85 cm (27.5 in.)
Equipment weight	43.1 kg (95 lbs), dry without vessels

Ordering Information

Product Description	Part Number
BIO-DIS Reciprocating Cylinder Apparatus, 115 V, 60 Hz	25-1000
BIO-DIS Reciprocating Cylinder Apparatus, 230 V, 50 Hz	25-1100

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Dissolution Testing, visit us at
[www.agilent.com/lifesciences/
dissolution](http://www.agilent.com/lifesciences/dissolution)

Accessory Ordering Information

Product Description	Part Number
BIO-DIS conversion kit, 100 mL	27-6100
BIO-DIS conversion kit, 1 L	27-6105
BIO-DIS conversion kit, double row dip, 300 mL	27-6200
BIO-DIS conversion kit, double row dip, 1 L	27-6202
BIO-DIS conversion kit, double row dip, 1 L/300 mL	27-6204

Modified versions of the BIO-DIS (7-tube, 6-row system and a 12-tube, 12-row system), inner sample tubes, wide caps, racks, outer media tubes, upper and lower caps, sample and return probes, replacement screens and evaporation caps are also available.

