



Compact, easy to use, reliable

The PT-DT70 is the new low head dissolution tester from Pharma Test. It provides a space saving, low cost entry into dissolution testing. Whether for a new laboratory or to meet tough budget requirements, the PT-DT70 offers a lot of instrument for a comparatively modest cost.

Tablet dissolution testing is one of the most important tests during development and manufacturing of solid dosage forms and transdermals. Nearly all international pharmacopoeias describe a dissolution test instrument, in which at least 6 samples should be tested. The test vessel design, stirring speed range, temperature range and accuracy, stirrer design and relevant tolerances are specified.

Today the instrument operator of such instruments expects not only conformity with the pharmacopoeia description, but also easy operation and accessibility to the test vessels. This means a dissolution bath should offer both good manual access as well as automation facilities.

The PT-DT70 offers both. The test vessels are placed in 2 lines (4+3) and it is easy to remove spent samples and refill with solvent by lifting up the drive housing. To insert samples and withdraw solution

30-03070_06.01

Page 1

7 holes and guiding tubes are placed inside the top cover of the instrument. Simply place your tablets next to the holes and introduce when ready for test start. For easy sampling use the PT-MDS Manual Sampling System which includes sampling tube - inline filter and a 10 ml. disposable syringe. The clear-view plexiglass water bath offers excellent views of the samples while they are under test. Also the PT-DT70 is already equipped with all necessary interfaces to connect a sampling system for test automation. Interface for installation of a DATA-LOGGER is built-in.

Brief Specifications:

1. 7 test stations = 1 additional unstirred vessel for blank or reference medium.
2. 4 + 3 format for USA FDA friendly application.
3. Pneumatic lift device which allows the drive head and testing tools to be raised out of the test vessels.
4. Housing made from stainless steel.
5. Full USP / DAB and EUR Pharmacopoeia conformity.
6. Fully adjustable and fully regulated paddle speed selection from 25 to 250 rpm.
7. Built in heater with microprocessor temperature control, over the range 25 to 45°C. Less than 0.3°C temperature deviation within the entire water bath
8. LED display for target (user specified) and actual temperature.
9. Bi-directional RS 232C interface for control of:
 - a) thermostat,
 - b) temperature,
 - c) motor start / stop,
 - d) speed functions
 - e) connect PT-DL1 Data Logger
10. U-shaped Plexiglas (Perspex) water bath with cover for all 7 working positions. Auto centring system for all vessels. Heating of Dissolution Media in full compliance to the USP recommendation = no stirring while heating media to avoid air introduction !
11. Delivery scope includes 7 round bottom test vessels.
12. Delivery scope includes a set of number stainless steel monoshaft stirrers and paddle inserts.
13. Includes a locating gauge for setting stirrer depth and centring stirrer in vessel.
14. 7 adjustable lock-nuts for exact positioning of stirrer shafts inside the test vessels.
15. Built in calibration programs for speed and temperature.

Optional Equipment:

- PT-DL1 Data Logger, prints at programmable sequences, actual stirrer speed and bath temperature
- fluor carbon coated Paddle stirrer adapters (USP App. 2)
- stainless steel Basket adapters (USP App. 1)
- stainless steel transdermal cylinder adapters (USP App. 6)
- gold plated Baskets
- amber colored USP round bottom vessels (UV protection)
- Transdermal Cylinder (USP App. 6)
- Paddle over Disk (USP App. 5)
- Calibration Kit, includes optical speed meter, digital thermometer, wobble meter - all certified
- USP Calibrator Tablets and Standards



PTFC2 Fraction Collector for automated sampling of the DT70 Dissolution Test Instrument



PT-MDS Manual Sampling System includes sampling tubes, disposable syringes and 10 micron filters

Technical Data:

Number of Stirrers:	7
Bench Space:	L 55 x W 50 cm
Pre-heating time:	approx. 30 mins.
Automation Facilities:	Yes, fully automation incl. spectrophotometer connection and fully CFR21 Part11 compliant WIN DISS32 software package, drives: SA-500 Diode Array, BUCHI 901, JASCO, Shimadzu, Perkin Elmer Lambda, Agilent 8453 – 6,7 or 8-cell changers or PTFC 2 Fraction Collector and Peristaltic or Piston Pump for semi automated operation
Stirrer speed:	adjustable within 20-250 rpm, accuracy ± 1 rpm
Bath Temperature:	adjustable within 25°-45.0°C, accuracy $\pm 0.3^\circ\text{C}$
Stirrer wobble:	within ± 0.2 mm
Measurable vibration range	< 0.1 mm/s. @ 50Hz

Weights and Packaging

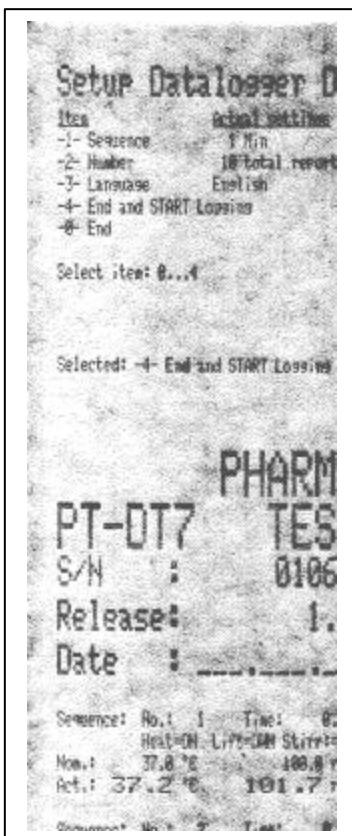
Netweight: 48 kg
Grossweight: 73 kg
Packing Dimm. 760 mm x 650 mm x 750 mm

Use the PT-DL1 to print the Runtime Log of the PT-DT70.

It includes the following informations:

- Programmed logging sequence
- total number of logs
- selected printing language
- Instrument serial number
- Firmware Release number
- Instrument status of heater (on/off), stirrer (on/off)
- Target bath temperature and stirrer speed setting
- actual bath temperature and stirrer speed at each logging sequence

The **PT-DL1** can be connected via the RS-232 interface at the PT-DT70 Dissolution Bath.



PT-DL1 Data Logger and print-out

Automation incorporating the PT DT70**On-line Systems**

This popular configuration is elaborate, but allows real time calculation of results using the **WINDISS 32 /Dissolution** Software and is by definition PC controlled.

With the SA500 Diode Array UV/VIS photometer, a multi-cell-changer (8 or 16 cells) and pump, the basic automation elements are entered into the program structure. This data, once installed will cause the software to further interrogate the user as to the configuration of the automation elements (wizard technology). Taking the spectrophotometer as an example, the program needs information as to whether there is a cuvette changer or not and if so, then is it a 6-, 8-way or 16-way. This is vital information as the blank medium has to be compared to the reference cell, and zeroed at the appropriate wavelength. In the case of the 6-cell changer this is done on cell 1 at the start of the measurement cycle only, whereas with an 8-way changer, the blank medium is normally selected to be transferred to cell 7, with the standard (for concentration calculation) in cell 8. This means that the medium can be compared to the reference cell and zeroed at the start of each measurement sequence. After the zero has been established the measurement sequence is then cell 8, followed by cells 1 to 6.

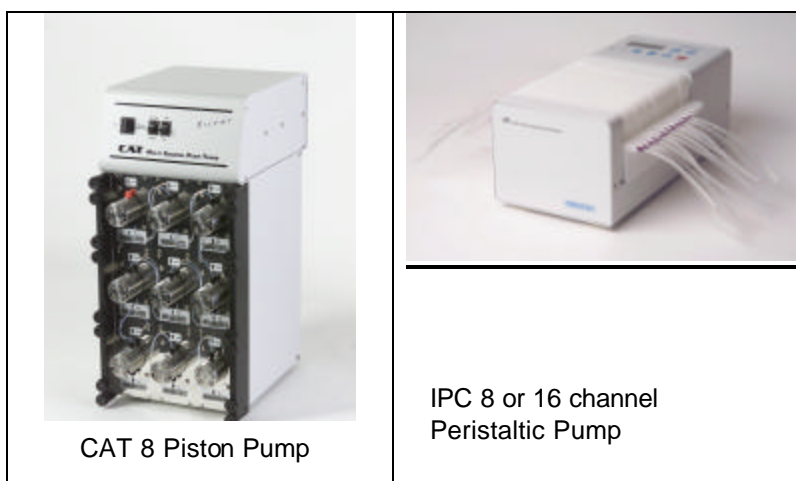
There are many spectrophotometer and auto sampler drivers available for connection to Pharma Test dissolution systems, even on-line HPLC, ask us..

Keeping the cost sensible....

We, at Pharma Test have opted to take the work out spectrometer selection and accessory hunting by offering complete systems which have not only differing degrees of sophistication but which also offer affordable options to cover all budgets.

Suitable Pumps

Peristaltic or Piston Pump



Suitable Spectrophotometer with cell changers

UV/VIS Diode Array Types:

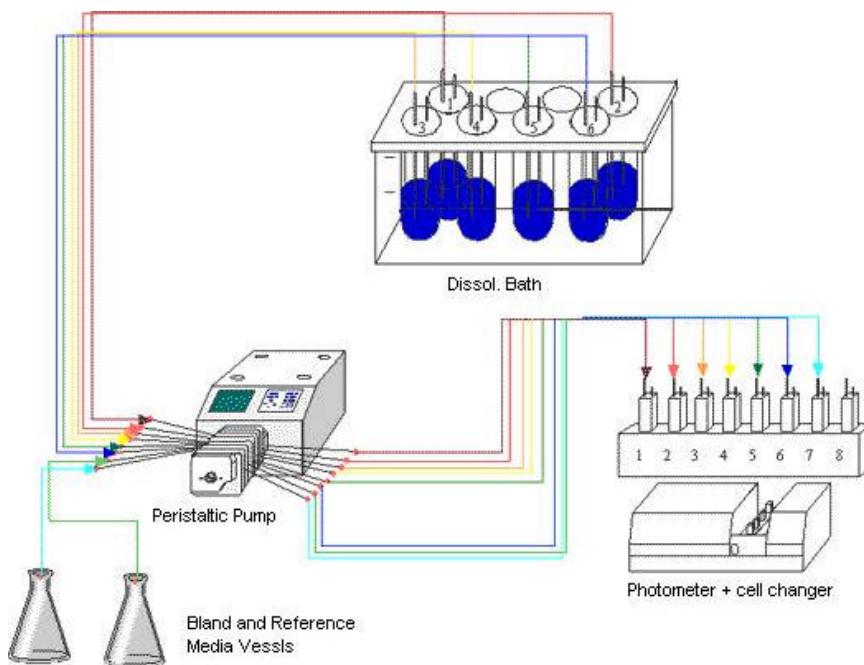
SA500 with 8-cell changer for 10x10mm and 20x10mm pathlength, or 16-cell-changer, fibre optic system

Agilent 8453 with 6- or 8-cell-changer

other UV/VIS Spectrophotometer Types:

Cecil CE 3200 with 8-cell-changer, Perkin Elmer Lambda, Shimadzu, Carry 50 etc..

Principle of Operation



The operator describes the operational procedure within the wizard driven software. Then the system will flag when the samples have to be introduced; after this point, the dissolution system works automatically. Prior to the measuring time the pump will be started and circulate the solvent through a 5 or 10 micron filter. During a measurement the pump is stopped temporarily and data is read and stored by the PC. The same is repeated for any programmed measuring cycle. As well as the measured absorbance, speed, temperature and pH-values (optional) are recorded. The selectable option to run a reference standard solvent,

(which is measured in each cycle) or the entry of a theoretical maximum absorbance is available. Running a standard offers some advantages as results that may be influenced by a less than optimum light source, evaporation or temperature influences are corrected by the reference measurement. At the end of a run the operator creates his report and chooses which data that he needs to have printed. As all results remain filed within the system, a batch comparison statistical analysis can be performed at any time.

For further information about dissolution automation ask for our **WINDISS32** Dissolution software flyer or for demo version.