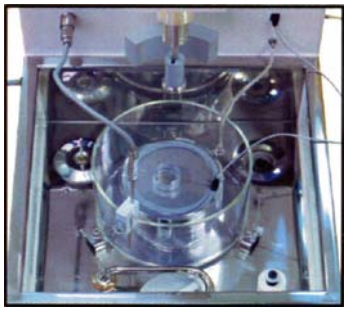
TOYAMA

Orally Disintegrating Tablet Tester, Model ODT-101

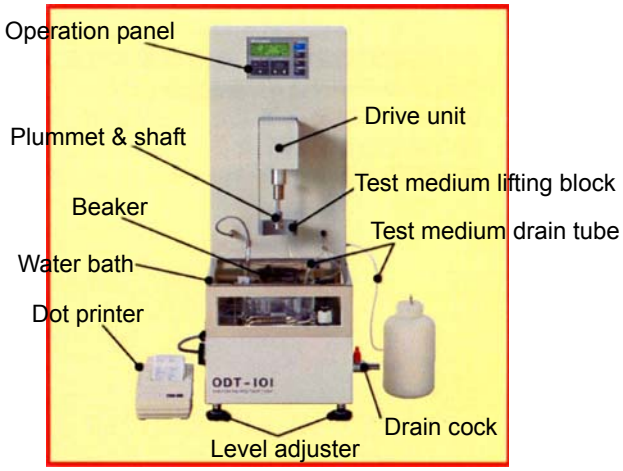
- **With distinguished in-vivo & in-vitro correlativity**
- **Patented jointly by Toyama & Eisai**
- **Applicable to tablets to be dosed without water**

This tester has been developed under the joint researches of our company and Eisai Co., Ltd. who have a top-level disintegrating technology in Japan. Disintegration of a tablet in a mouth cavity largely depends on a little amount of water equivalent to saliva and a little frictional power between glossa and maxilla. This innovative tester makes it possible to measure the time of tablet disintegration in a mouth cavity in vitro at the minimum unit of 1/100 sec. very simply but with good repeatability without any personal difference, as a result of our pursuit of correlativity with the data of human sensory analysis.
Using this tester, disintegration of a tablet in a mouth cavity can be evaluated without carrying out any actual sensory analysis by humans, which will largely contribute to your quality control.

* Bibliography: Narazaki R., Harada T., et al., Chem. Pharm. Bull., 52, 704-707 (2004)



View inside the bath from up



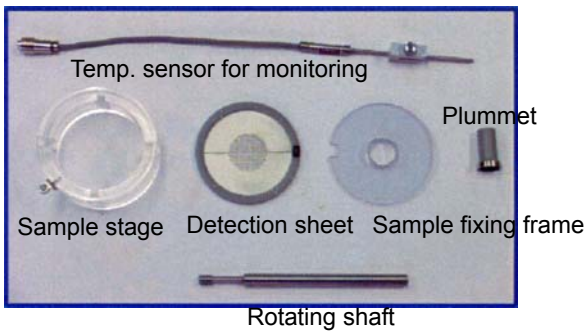
<Features>

- **The state that the lower part of a tablet touches a little amount of test medium is accurately reproduced.**
- **Immediately after a tablet touches test medium, swallowing strength is loaded on the tablet by rotating a plummet at the specified revolutions to measure the time for disintegration.**
- **Disintegration time is electronically and automatically counted at the accuracy of 1/100 sec.**
- **The stress taking count of correlativity with in-vivo (plummet and revolutions) can be selectively set.**
- **Test temperature can be monitored.**
- **Validation (IQ and OQ) can be supported by us case by case.**

<Standard Specifications>

Model	ODT-101
No. of shaft	1
Shaft diameter	10mm dia. straight (with a lock-pin); Hanging portion at 5mm dia.
Shaft mounting	One-touch mounting type
Revolutions setting	5 to 140 rpm (stepless change by key input)
Revolution transmission	Using a timing belt
Motor for revolution	Brushless DC motor (output: 10W)
Drive unit lift/lower motion	Auto (automatic stop at the specified position)
Motor for driving	Reversible motor (output: 1W)
Measurement time display	Min. unit at 1/100 sec. (switchable to min.sec. or sec. only)
Plummet	15mm dia./ 10g, 15g 20mm dia./ 10g, 15g, 20g
Sample stage	90mm dia. x H.48.5mm (transparent acrylic plate)
Detection sheet	0.1mm thick (SUS-316)
Beaker	140mm dia. x H.75mm (flat bottom, glass made)
Pump	660mL/min. (used to adjust liquid level)
Water bath	Heater: Pipe heater (300W) Temp. control: Micro-computer PID Temp. sensor: Platinum sensor (Pt100Ω) Temp. range: Room temp. + 5°C to 59.9°C Temp. accuracy: ±0.1°C Stirrer: Magnetic stirrer
Safety devices	Earth leakage breaker, overheat protector, and water temperature limiting device
Dot printer printing items	Test year/month/day, test start time, bath temperature, beaker temperature, revolutions, tablet thickness, plummet's diameter and weight, disintegration time, etc.
Dimensions	270(W) x 706(H) x 420(D) mm
Weight	Approx. 18kg
Power supply	100/110/220 V AC, 50/60Hz (350W at 100V)
Standard accessories	Plummets (5), sample stage, sample stage fixing ring, sample fixing frames (2), detection sheets (2), rotating shaft, flat bottom beaker, level, stirrers (2), drain pipe, detection cables (4), temp. sensor for monitoring, dot printer

* The above specifications are subject to change without prior notice due to improvement.



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