



Máy đo độ hòa tan 08 vị trí mẫu, Model: DIS 8000



Quality Solutions for the Testing of Pharmaceuticals

2016 EDITION

TABLETS AND CAPSULES • SUPPOSITORIES • TRANSDERMALS
DETERGENTS • POWDERS AND GRANULES • CREAMS AND OINTMENTS

FRIABILITY (UNCOATED TABLETS)

DRUMS

The Friability Drum has been designed for testing the rolling and impact durability of tablets and has a single curved baffle which allows the tablets to be tested to rise and then drop through a distance of approx. 156 mm. Premature fracture or sign of wear at the edges indicates that such tablets may not withstand the rigours of transportation.

All Friability Drums are now fitted with an aperture such that **it is no longer necessary to remove and open the Friability Drum in order to load and remove the samples.**

At the start of the test, the drum automatically revolves until the aperture(s) faces the operator so that the tablets can be loaded. On completion of the test, the drum stops and then reverses automatically emptying the contents of the drum into the waiting collection tray(s). All Friability Drums are completely **interchangeable**, i.e. they will fit either side of the tester.

Abrasion Drums for carrying out tests into attrition are also available as an optional extra. The Abrasion Drum comprises of a drum 20 cm diameter with a series of baffles, which carry the tablets to a predetermined height before sliding off and reproduces the action of the tablets rubbing against each other during transport.

All testers can be equipped with a choice of either USP Friability Drums and/or Abrasion Drums. Dual drum units can, for example, be fitted with one Friability and one Abrasion Drum, thus allowing comparisons to be made between the two parameters under identical test conditions.

Friability Tester
FR 2000 with
1 x Friability Drum
& 1 x Abrasion
Drum



OPERATION

Considerable attention was paid to the design of the FR and FRV series to ensure that the number of actions necessary to perform a test are kept to a minimum. Consequently, once the method (number of revolutions or time) has been selected and the test duration set, it is only necessary to press the START key to initiate the test.

The standard test procedure is to take a sample of 10 tablets (a sample equivalent to 6.5 grams should be taken if the tablets weigh less than 650 mg), the weight of which has already been determined (W1). The tablets should be de-dusted prior to weighing.

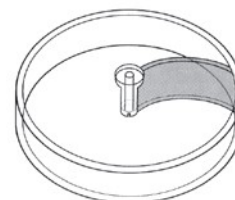
The tablets are then placed into the test drum and allowed to rotate 100 times. The tablets are then re-weighed (W2), having first removed any accumulated dust, and the results calculated in terms of % weight loss utilising the formula $(W1-W2) \times 100$ divided by W1. In general, a maximum

weight loss of not more than 1% is acceptable for most tablets. If necessary, repeat the test twice more basing the result on the mean of the three tests.

Dimensions (mm):

FR 1000 / FRV 1000 =
290 x 360 x 350 mm (w x d x h)

FR 2000 / FRV 2000 =
342 x 360 x 350 mm (w x d x h)



Schematic of Friability Drum



Schematic of Abrasion Drum

Cat. No. Description

1401	Friability Tester FR 1000 (Fixed Speed - 1 Drum)
1402	Friability Tester FR 2000 (Fixed Speed - 2 Drums)
1403	Friability Tester FRV 1000 (Variable Speed - 1 Drum)
1404	Friability Tester FRV 2000 (Variable Speed - 2 Drums)
1405	Extra for Numbering & Certification (per Drum)
1406	IQ/OQ/PQ Documentation Pack
1410	Qualification Tools
1407	Abrasion Drum (Optional extra)
1408	Friability Drum (Spare)
1409	Device for angling friability tester at 10 degrees



UK, Ireland & International Sales:

Copley Scientific Limited

Colwick Quays Business Park
Private Road No. 2, Colwick
Nottingham NG4 2JY
United Kingdom

Tel: +44 (0)115 961 6229

Fax: +44 (0)115 961 7637

e-mail: sales@copleyscientific.co.uk
web site: www.copleyscientific.com

Austria, France, Germany, Italy & Switzerland:

Copley Scientific AG

Erlenstrasse 27
Postfach 152
CH-4106 Therwil
Switzerland

Tel: +41 (0)61 725 25 35

Fax: +41 (0)61 721 31 87

e-mail: sales@copleyscientific.ch
web site: www.copleyscientific.com