Attachment : 4018 Determination of Breaking Force for Glass Ampoules

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The breaking force is the force to be applied to separate the stem of the ampoule from the body.

Instrument: Ampoule breaking force tester. A material testing machine or other device whose function meets the requirements of this test can be used. The range of measurable force: 0-200N. The accuracy is not less than 0.01 N.

The Instrument is shown in the figure.

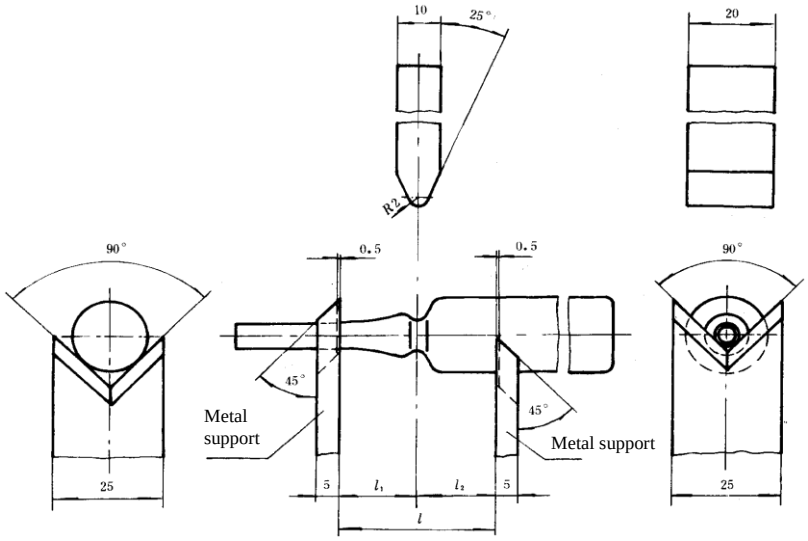

Figure Set-up for determining the breaking force of glass ampoules

Determination: Set the distance between the metal bars (as shown in the figure and specified in the table) so that the force is imparted on the middle of the bars at an angle of 90 °to the axis of the ampoule. Take the sample and put it on a metal bracket. Apply force with the ampoule breaking force tester or a material testing machine until the ampoule breaks and record the value of breaking force. Test speed (without load): 10 mm/min±0.5 mm/min. When determining the breaking force of easy-breaking glass ampoules with dots, the force applying component of the device shall be positioned in the middle of the cut (with the cut facing down), otherwise the breaking force will increase.

Table Ampoule size and distance between metal supports

Size (ml)	Distance between metal supports, $l = (l_1 + l_2)$ (mm)
1 2 3 5	36=(18+18)
10 20 25 30	60=(22+38)

Drafted by: National Institutes for Food and Drug Control Contact number: 010-67095110