Application manual No. 112

Production: RICE PAPER

Objective: Measurement of the burst strength of rice paper

Type of action: Burst test

Test mode settings:

Speed	Test mode	Trigger	Target	Hold
1 mm/s	Distance (c)	5 gf	5 mm	0 sec

**Accessory:**
Film Penetration (SP05) rig, Platform

Sample Preparation:
Sheets of rice paper are cut into small squares approximately 30 mm x 30 mm. Five samples of rice paper were tested to generate the results below.

Test Set-Up:
The film support rig is fitted to the heavy duty platform and positioned loosely on the machine base. The spherical probe is connected to the load cell with a probe adaptor (AD10) and the film support rig is aligned with the spherical probe to ensure the probe can move centrally through the aperture without contacting the film support rig. When positioning is complete the heavy duty platform is fixed securely to the machine base. The test set up is shown in figure 1.

Typical plots:
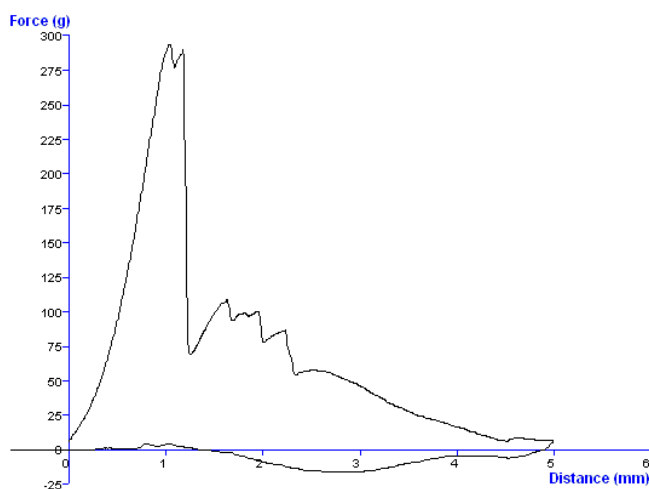
Graph 1. Typical Texture Analyzer Plot for a Rice Paper Sample
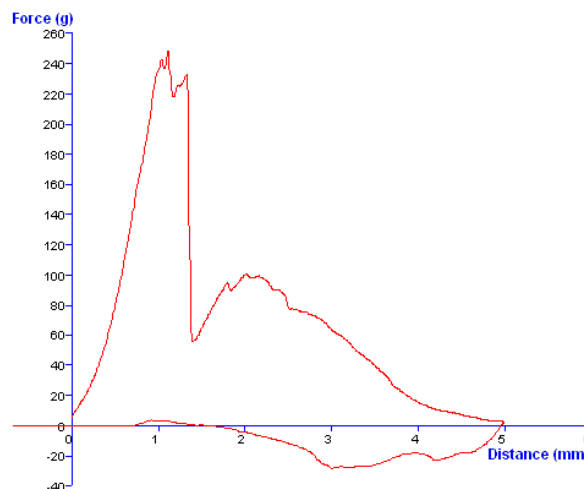
Graph 2. Texture Analyzer Plot for Rice Paper

Observations:

The test begins with the probe moving at the pre-test speed. When the probe reaches the surface of the rice paper and the trigger force is reached the probe speed changes to the test speed and data is recorded. As the probe deflects the rice paper the force increases until the sample bursts. The peak force is the burst strength and the displacement is the distance to burst, which is an indication of the flexibility of the rice paper.

Data Analysis:

☒Max Force

Results

Film Sample Type	Mean Burst Strength (+/- S.D.) (g)	Mean Distance to Burst (+/- S.D.) (mm)
Rice Paper	269.4 +/- 31.08	1.12 +/- 0.14

Notes:

- This application study can be extended to other film/sheet samples. The target distance may need to be increased for more flexible films and a higher capacity load cell may be required for thicker, higher burst strength films.