

Durum Method

Scope

- Determine durum quality for pasta production.
- Assess starch quality and amylase activity in durum flour.
- Quality control.

Rapid Visco Analyser

The Rapid Visco Analyser (RVA) is a cooking stirring viscometer with ramped temperature and variable shear profiles optimized for testing viscous properties. The instrument includes international standard methods as well as full flexibility for customer tailor-made profiles. Combining speed, precision, flexibility and automation, the RVA is a unique tool for product development, quality and process control and quality assurance.



Description

High quality hard pasta products, such as spaghetti, are produced by a cool temperature extrusion process using durum semolina. The quality of the product depends in part upon starch quality and amylase activity. These can be readily assessed in the RVA.

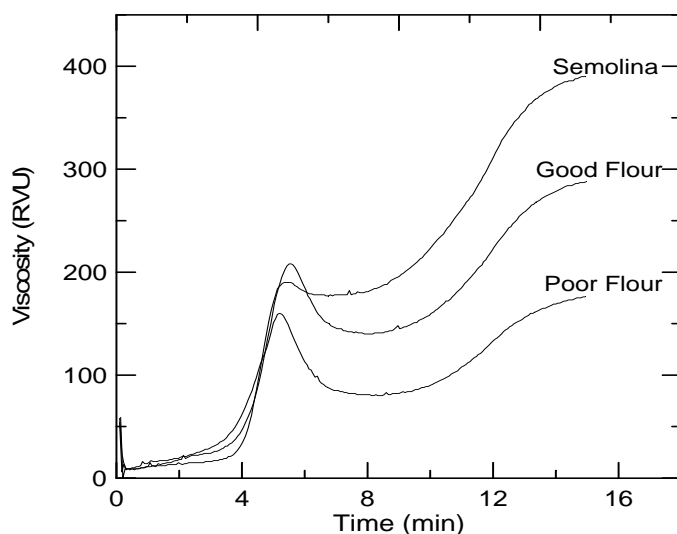


Fig. 1. Pasting curves of semolina and a good and poor durum flour.

Method

Thirteen-minute pasting profile.

Sample Preparation

3.50 g durum flour or ground semolina at 14% moisture and 25.0 ml distilled water.

Profile

Time	Type	Value
00:00:00	Temp	50°C
00:00:00	Speed	960 rpm
00:00:10	Speed	160 rpm
00:01:00	Temp	50°C
00:04:42	Temp	95°C
00:07:12	Temp	95°C
00:11:00	Temp	50°C
00:13:00		
Idle Temperature: 50 ± 1°C Time Between Readings: 4 s		

Measure

PV: Peak viscosity (cP)

BD: Breakdown (cP)

FV: Final viscosity (cP)

The FV is the RVA Durum Index. Higher values indicate lower amylase activity and are generally associated with better quality semolina or flour. Peak and breakdown viscosities depend in part on particle size, so are usually lower in semolina than the more finely ground flour (see example Fig.1).