Japanese Rice Method

Scope

- Rapidly determine rice quality.
- Compare different rice varieties.
- Better discrimination between rice samples of similar quality.

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

Rice sensory quality is of prime importance throughout Asia where rice is a staple food. This method, developed by The Food Agency in Japan, provides a longer profile than Method 10, to better discriminate between rice samples of similar quality.

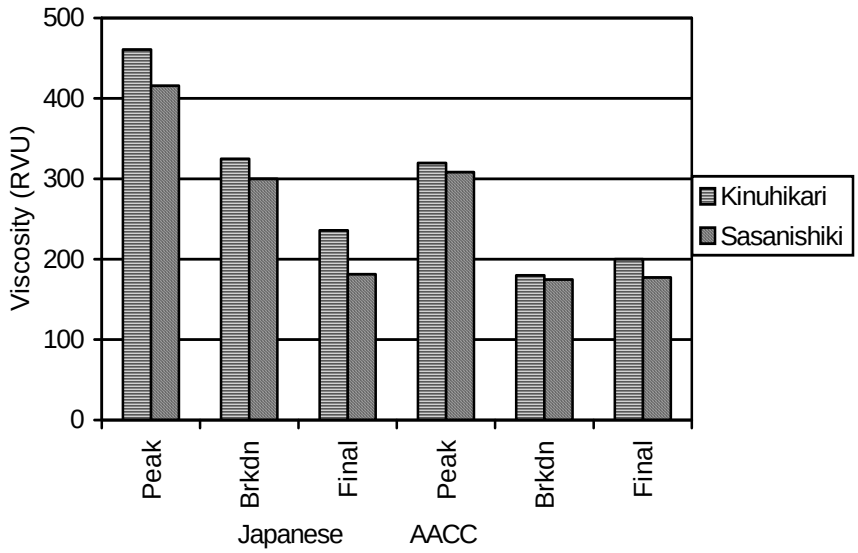

Fig. 1. RVA pasting viscosities of two varieties of Japanese rice using the Japanese and AACC International methods. Source: Ken' ichi Ohtsubo, *RVA World* 12:4, 1998.

Method
Nineteen-minute pasting profile.

Sample Preparation
3.50 g ground milled rice or 4.00 g ground brown rice (14% mb) flour 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
00:05:00	Temp	93°C
00:12:00	Temp	93°C
00:16:00	Temp	50°C
00:19:00	End	
Idle Temperature: 50 ± 1°C Time Between Readings: 4 s		

Measure
PV: Peak viscosity (cP)
FV: Final viscosity (cP)
PT: Pasting temperature (°C)
PTi: Time to peak (min)
TV: trough/minimum viscosity (cP)

Derive the RVA Japanese Rice Setback Index as the final minus the peak viscosity. Higher values indicate firmer and drier cooked textures of whole rice and are usually associated with higher amylose contents.

See also Method 10: RVA Rapid Rice Method (AACC International Method 61-02.01).

Using different models of grinders will significantly affect the results.