

Rapid Visco Analyser

RVA 4800

New - up to 140°C



Ingredient



Formulation



Process



Final Products

Measure Performance at Temperatures over 100°C.



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Perten
INSTRUMENTS
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Rapid Visco Analyser RVA 4800

The RVA measures the viscosity and performance of starches, raw materials, ingredients and foods using controlled temperature and shear. It can be used to characterize ingredients, intermediates and finished products to optimize quality and performance. With an extended temperature range (up to 140°C), the RVA 4800 provides a tool for performing more relevant analyses for a variety of applications, including ingredient (eg. starch and hydrocolloid) performance under conditions relevant to ultra-high-temperature (UHT) pasteurization of dairy and food products, retorting, pressure cooking, extrusion and other aseptic processing conditions. Temperature and stirring speed (shear) can be programmed to follow international standard methods or custom methods, or use the RVA as a miniature pilot plant to mimic real-world manufacturing and preparation processes such as heating, cooling and mixing. The RVA 4800 interfaces with a PC and TCW3 software for operation and data management and includes a library of methods for many applications. RVA 4800 combines speed, precision, flexibility, and automation and is a unique tool for research, product development, process monitoring, QC and QA to optimize ingredient use, product formulation and processing conditions.

Features & Benefits

Extended Temperature Range: UHT pasteurization of dairy products, aseptic processing (e.g. retorting, pressure cooking, jet-cooking) food safety and quality.

High Sensitivity: Direct drive motor and control system for low viscosity samples.

Rapid Viscosity Profile: Standard starch pasting test in 13 minutes.

Robust: Suitable for factory floor to analytical laboratory.

Traceable: Calibration check with traceable standards to satisfy ISO9000/ISO17025.

Precise: Accurate, crystal-locked stirring speeds, heating and cooling rates, ensures repeatable results between RVAs.

Standard: Standard methods approved by ICC, AACC International and others.

Relevant: Tailor test routines to emulate processing conditions in industry.

Safe: High-temperature components, testing vessel locked when heating block is >100°C, pressure release valve.

ER/ES Compliant: Compliant with FDA 21CFR101 and similar requirements.

Applications

Suitable for R&D, product design, production, quality assurance, quality control, raw material testing, process design and process control.

Starch: Standard and high-temperature pasting tests in as little as 13 minutes to characterize performance in retorting or batch cooking conditions.

Dairy: Assess ingredient suitability for UHT applications for dairy and other food products, processed cheese manufacture and melt, soft dairy desserts, ice cream, yogurts.

Gums: Gelling and thickening profiles of hydrocolloids (and their combinations with starch) and formulations.

Miniature Pilot Plant and Aseptic Processing: Characterize ingredient performance through sterilizing or pasteurizing conditions, test new ingredients, formulations and process conditions prior to scale-up.

Flour Milling & Baking: Starch quality, amylase activity, weather damage, for bread, cakes, pastries, cookies, pasta, noodles and more.

Specifications

Power Requirements: 230/115VAC, 5A, 50/60 Hz.

Input/Output: USB port, RS232 serial port.

Dimensions (H x W x D), Net Weight: 382 x 306 x 345 mm, 19 kg.

Temperature Range: 0-140°C.

Heating/Cooling Rate: Up to 14°C/minute (infinitely variable).

Coolant Consumption: Water, 1 l/min at cooling, 100-250 kPa. Chilled coolant required for cooling below room temperature.

Speed Range: Computer controlled, variable 0, 20-2000 rpm.

Viscosity Range: 20-40,000 cP at 80 rpm, 10-20,000 cP at 160 rpm at 25°C.

Viscosity Accuracy: +/- 2% for S2000 Oil nom. 5000 cP.