novomatics
labtech solutions

THERMOTRONIC III/200

new automatic varnish cooker

to produce many formulations in a short time

- automatic device with programmable temperature and stirring program
- standard practice for oil-based resin solutions
- ASTM D5958 test method
- produces consistent varnish quality within 20 min.
- larger test tube to cook a weight up to 200 grams

The THERMOTRONIC is an instrument to prepare resin solutions according to the test specification of the user. Test samples for rheological tests can be prepared in a repeatable manner without the need for special skills. Test samples may have different resin percentage and may be made of test oils with different solvencies, but oils and dosage should reflect actual formulations.

Features

- fully automatic microprocessor controlled varnish preparation device
- reproducible and programmable temperature and stirring profile with predefined program acc. to standard test method ASTM D5958
- user definable access to program parameters for LAB or QC application
- four programmable beeps to indicate end of program and ready condition
- automatic temperature calibration
- cost savings by higher production yields
- improved end use product quality

Typical applications

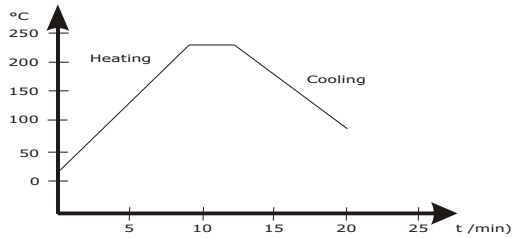
- varnishes
- flushes
- mineral oils
- solvents
- binders
- natural resins
- synthetic resins
- dispersions

Introduction

Varnishes form the back-bone of modern inks and their rheology has a major effect on the performance of finished inks. Therefore, it is important to test varnishes for ink formulations intensively. The THERMOTRONIC is an automatic device that produces varnishes of consistent quality, so that test results become more accurate and can be quantified.

Test procedure

The sample is heated up to a temperature level of 230°C by a highly effective integrated air jet heating system and remains at this temperature level for a few minutes during which the resin is completely dissolved in the test oil. The solution is then cooled down under controlled cooling and stirring conditions to 90°C. When this temperature level is reached, an audible and visible alarm is activated to indicate that the varnish is ready for viscosity tests or preparations of ink formulations. The metal test tube can be removed from the THERMOTRONIC 200 by the integrated isolated grip.



Standard method

This method has been approved by standardization committees for ink test methods. In Europe the EUROCOMMIT and in the USA the ASTM commitee has approved it. The ASTM test method number is D5958: standard practice for preparation of oil-based ink resin solutions.

Calibration

In the THERMOTRONIC a powerful microprocessor system is installed for the control of all instrument functions. A high resolution A/D-converter is used to convert the analogue inputs of the Pt100 sensor into a digital signal. The input circuit is designed for automatic calibration by internal references. The measuring accuracy is ± 0.1°C without the need of recalibration.

Technical Specification

Temperature range	0-250°C max.
Temperature accuracy	± 0.3°C
Stirring speed range	200-600 rpm
Stirring accuracy	± 2 rpm
Sample weight	200 g
Interface	USB
Sample volume	200 ml
Temp. monitoring	Windows based software package
Power consumption	1200 Watts max.
Mains	110 V or 220 V / 50-60 Hz
Dimensions	270 x 295 x 400 mm (W x H x D)
Weight	13,0 kgs

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