novomatics
labtech solutions

easy handling

accurate turbidity measurements

automatic cloud point determination acc. to ASTM D6038

new automatic cloud point tester

CHEMOTRONIC III

automatic cloud point determination made simple

Introduction

The **CHEMOTRONIC III** test system allows determination of solubility by cloud point measurements with a high degree of accuracy and reproducibility. By exact programmable test conditions this methodology offers great advantages over the usual manual test methods. The **CHEMOTRONIC III** is a problem-solving approach to test compatibility and stability of resin-solvent systems and offers a practical solution to commonly encountered changes in physical properties of these products.

Typical applications

- automatic cloud point testing
- compatibility testing
- solubility testing
- mineral and vegetable oils
- natural and synthetic resins
- polymers

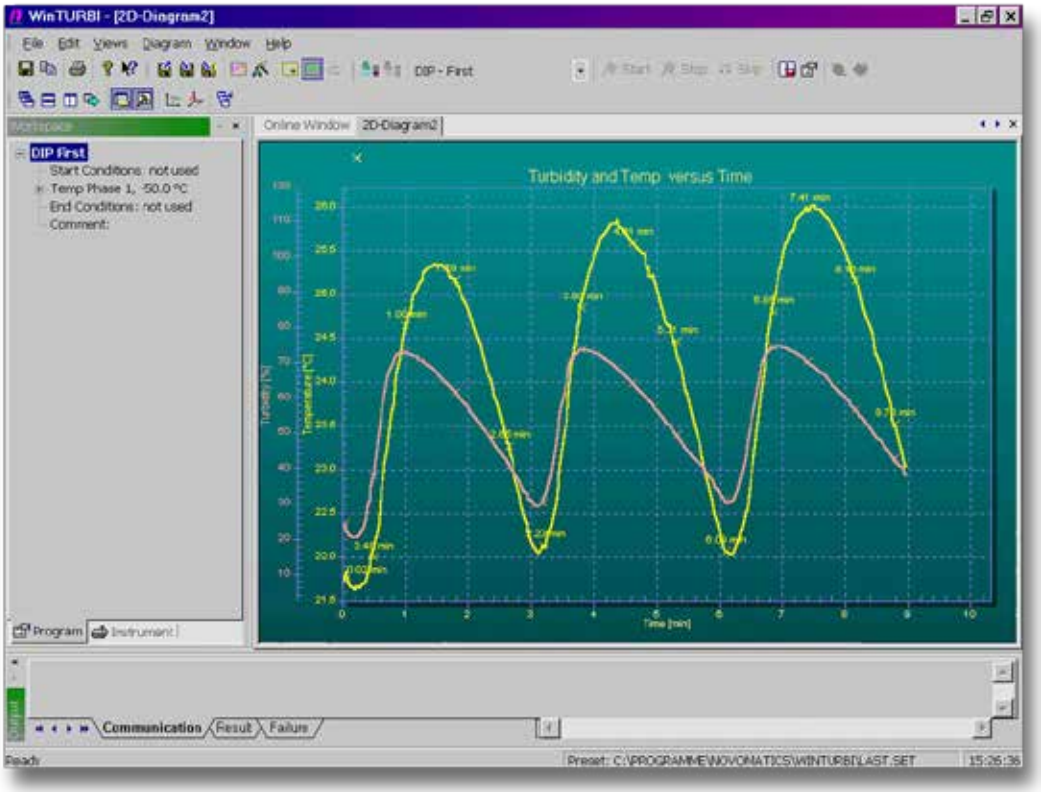
Features

- improved accuracy in temperature and turbidity determination
- automatic turbidity and temperature calibration for measurement stability over life-time
- simplified operation
- various temperature profiles pre-defined by factory or user
- test record by a printer or optional by WinTURBI PC software
- cost savings by higher production yields
- compact aluminium case
- compatible to CHEMOTRONIC II

The **CHEMOTRONIC III** is a computer controlled instrument featuring automatic temperature control with heating and cooling actions and stirring speed control to perform automatic tests under controlled conditions in order to achieve accurate test results.

Turbidity analysis

Advanced turbidity analysis is possible by use of **WinTURBI** application software. By this software, all functions of the CHEMOTRONIC instrument can be controlled from any PC. Automatic data collection and graphical data display facilitates precise analysis of test samples. The data collected and previous data may be viewed and analyzed. Turbidity can be plotted versus time or temperature and can printed providing a permanent record of each test.



Test procedure

The glass test tube must be filled with only 20 grams of liquid and must be inserted into the hole on top of the instrument. After that, the precision Pt100 thermometer assembly is placed on top of the test tube. Then the test program for the test is selected and the actual test can be started by pushing the start button. The temperature will follow the temperature slopes and end points of the selected test program. The temperature at which the resin precipitates in the solution is called the cloud point. This point is detected accurately and a record of the test is printed out automatically at the end of the test.

Quality assurance

Derivations in cloud point may lead to quality problems of end products, so that regular cloud point tests are crucial to maintain consistent quality products for ink formulations. Cloud point tests are important in resin production, Q.A. and R & D in the production of printing inks and similar applications.

Calibration

The instrument is equipped with auto calibration for the temperature and stirring functions. The turbidity can be calibrated by range-calibration with turbidity standards (Formazin-solution) or by automatic calibration. The latter function operates well under all circumstances as the reference turbidity is measured at the top temperature automatically. The actual turbidity level can be set within 10-90% of the reference value.

Technical data

Cloud point detection range	30-230 °C
Temperature accuracy	± 0.2 °C
Stirring speed range	0-1100 rpm
Stirring speed accuracy	± 2 rpm
Turbidity calibration measurement	automatically or by reference turbidity
Turbidity range	40-4000 NTU
Operation	Stand-alone or via WinTURBI PC software
Interface	USB
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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