



Have you ever been upset about the time and the expenditures you have to pay for achieving reliable feedback on the content of spin finish and additives of your filaments, fibers or nonwovens (% FOY, % OPU)? Did you ever wish to free yourself from waste disposal expenses for the necessary dissolvent?

ALFA 500 is an automated spin finish analyzer, which permits a flexible and reliable production control. It determines the content of finish on yarn and fibers as well as the content of additives on nonwoven materials by means of a highly automated procedure. Additionally to the efficient handling and automatic function it also offers quick testing with approximately 3 minutes test duration per sample. 28 samples are tested without direct operator control and the preparation time is much less than with other systems.

That gives your operator time to take care of other jobs, it reduces the possibility of errors and makes the results more reliable. In case of necessity you can easily increase the frequency of measurements for a more detailed production control or for specific problem analysis without requiring additional equipment or staff.

ALFA 500 uses hot deionized water as finish dissolvent. Its application as dissolvent has been successfully proven in long years of implementation in production control with most different spin finish types and additives. Using deionized water as a dissolvent saves time and costs, since no expensive disposal of chemical dissolvent is required anymore. Moreover, the environmentally friendly dissolvent also guarantees for compliance with any compulsory environmental regulations.

Scope:

Determination of spin finish content of filament yarn and staple fiber or additives of nonwoven materials. Suitable for all organic oil, fat and carbon based finishing agents.

Method:

A known amount of material is put into a measuring vessel, to which hot deionized water is added as a dissolvent. Through constant stirring, the finish is extracted from the sample. The resulting emulsion is pumped into the Total Carbon Analyzer where its carbon content is determined. The autochanger subsequently moves one sample after the other to the extraction unit and TC-Analyzer. Up to 28 samples can be tested automatically.

Results:

Based on the amount of organic carbon, the % OPU (Oil Pick Up) or % FOY (Finish On Yarn) is calculated and printed. The results can be stored in a data base for further evaluations. Data transfer (ASCII-format) to a host computer is possible.

Testing time:

3 minutes per sample

Measuring range:

0 - 200 ppm TC (total carbon) corresponding to:
approx. 0 % to 5 % FOY, OPU

Accuracy:

± 0.02 % FOY, OPU depending on spin finish

Repeatability:

Better than ± 1.5 %
(standard calibration solution)

Sample size:

Typically approx. 2 g

Gas supply:

HC free synthetic air;
composition:

O₂: 20 ± 1 %

N₂: 80 ± 1 %

H₂O: < 5 ppm

C_nH_m: < 0.1 ppm

Gas consumption:

Approx. 200 ccm at 3.5 bar during measurement

Dissolvent:

Deionized water at a temperature of > 60 °C (It is not to be understood to extract 100 % of finish, but to extract finish in a reproducible way by using a certain fixed and reproducible procedure.)

Dimensions:

Height: 700 mm

Length: 1140 mm

Width: 660 mm

Weight: 72 kg

Power supply:

230/115 VAC ± 10 %, 50/60 Hz, 1000 W

ALFA 500 consists of:

- Auto sampler
- Extraction unit
- TC analyzer
- Evaluation PC

Evaluation and control unit:

Personal Computer, Keyboard, Windows® operating system

Interface:

Ethernet

Option:

OPC UA interface

Technical data and pictures are subject to change.