

Macrosticky determination according to DIN-Spec 6745

Determination of sticky and non-sticky macroscopic particles in paper with NIR camera technology



The new NIR imaging measurement method enables the determination of macrostickies, but also of nonadhesive polymers without a separation step directly in laboratory sheets of fabric samples or in finished paper. The objects are determined by number, size and area. In addition, it is possible to classify the detected impurities according to their chemical composition.

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Advantages over previous determination methods:

- Direct measurement in the dry paper sheet without sample preparation
- No fiber sorting and staining required
- Significant savings in time and personnel and therefore thus cost reduction. The only effort required sampling and, if necessary, making laboratory sheets for stock suspensions
- NIR classification module enables differentiationbetween adhesive and non-adhesive as well as the identification of all other substance classes of polymeric impurity particles





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Technical details:

The measuring system DOMAS Macrosticky is a complete system, consisting of a NIR measuring station a PC and a measuring and operating software. The components are compactly enclosed in a $1 \times 1 \times 0.8$ m structure. The core component, an NIR line scan camera, has a resolution of 120 x 120 µm per pixel, which is equivalent to over 200 dpi.

Measurement procedure:

The sample table contains a complete DIN A4 sheet of paper, but also a typical sheet, but also a typical RK sheet and larger groove sheets. After closing the cover, the fully automatic measurement begins. No pre-setting has to be made. The measurement itself takes up to 5 minutes, depending on the size of sample and ends with a visualization, quantification and classification of the polymeric objects.

Evaluation:

The NIR raw data are assigned to the individual chemical components within a decision tree, combined into objects and statistically processed.

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