

AFIS device

Starting from January 2014 VUB a.s. operates AFIS device - testing instrument produced and delivered by reputable producer of textile testing devices Uster Technologies (former Zellweger Uster).

AFIS is a modular device intended for testing and analysing of 100% cotton samples in the form of bale, opened and cleaned material (card mat), sliver and roving.

This device belongs to high-efficiency testing lines frequently called HVI (high volume instrument).

The history of such devices started in 90's - Zellweger Uster launched the first devices specialized to neps analysing. Thanks to further development at present AFIS offers also other modules, from which L (length) and T (trash) modules are most widely used.

The main advantage of AFIS device is testing without application of any clamps - fiber strand (ca 0,5 kg, 30 cm) is delivered to opening mechanism, where the strand is open up to individual fibres, which are measured by different sensors.

Standard testing procedure contains five partial tests, test result represents mean value and (and variation) of measured parameter.

The device installed in VUB is equipped with N&L&T modules and can measure neps, length parameters and trash and parameters.

N Module

- nep count per gram – fibre neps + seed coat neps
- nep size [micron] – fibre neps + seed coat neps
- SCN /g – seed coat nep count per gram
- SCN size – seed coat nep size

L Module

3000 fibres standardly measured

- L(n) – mean length by number (mm)
- L(n) CV% – length variation by number
- SFC(n) – short fiber content - fibres shorter than 12,7 mm
- L(n) 2,5% – 2,5% - length by number
- L(n) 5% – 5% - length by number
- L(w) – mean length by weight (mm)
- L(w) CV% – length variation by weight
- SFC(w) – short fiber content by weight - fibres shorter than 12,7 mm
- UQL(w) – upper quartile length by weight

T Module

- Total Cnt/g – trash count per 1g
- Cnt/g – trash count per gram (particle size > 500µm)
- Dust Cnt/g – dust count per gram (particle size < 500µm)
- Mean Size
- VFM % - visible foreign matter (dust and trash content in %) suitable parameter for sample comparison