

## Filtratest

### Analysis of polymer impurities

- Description of foreign substances
- Determination of quality-reducing inhomogeneities



## Filtratest

### The concept

The Filtratest is used for the exact determination of the foreign substance concentration and quality-reducing inhomogeneities. The procedure is suitable for the description of concentration, size of particles, kind of foreign substances, and higher-viscous particles regarding the test material. The quality of the extrudate is described with regard to concentration, particle size, kind of foreign substance, and higher-viscous particles in the melt.

The melt flows through finely woven sieves. Due to the deposit of the foreign substances the pressure increases. It is measured by means of a pressure transducer in front of the insert and recorded continuously during measurement. The additional analysis of the deposit gives more information about kind and amount of polymer impurities.

ISO certified to DIN EN 9001:2000



## The procedure

The Filtratest can be connected to a 19 mm or 30 mm measuring extruder. The extruder guarantees the processing and the transport of the polymer melt.

The melt is guided through the extruder to the Filtratest, where it flows vertically through the filter. The pressure increase in front of the insert is measured by means of the pressure transducer.

The pressure difference between the initial pressure and the maximum pressure is used for calculating the filter pressure value (FPV).

$$FPV = (P_2 - P_1) m_c$$

$P_1$  = initial pressure (bar)

$P_2$  = maximum pressure (bar)

$m_c$  = amount of pigments in sample

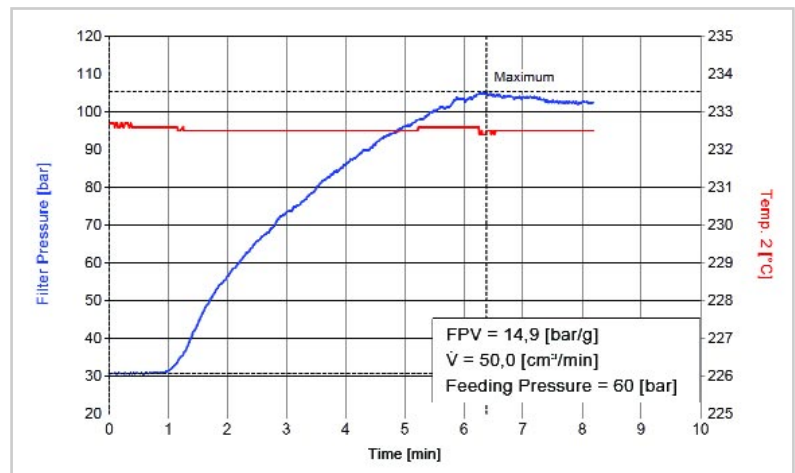
## Fields of application

- Color recipe development
- Quality control of masterbatches, compounds and polymers.

## International standard

The Filtratest complies with the conditions of EN 13900 - 5.

Alternatively it is possible to work regardless of the standard. In this case the purity of polymers can be tested. The pressure increase is due to the plugging of the sieves through agglomerates, gels and/or foreign substances.



*evaluation shows pressure increase*

## Advantages of the Filtratest

- quick change of sieves with drawer system
- integrated pre-heating of the sieve package
- short-time cycle times and continuous extrusion procedure by bypass option of the melt flow
- comfortable Windows® Software
- optimal: sliding funnel combination for flushing ring and sample

## Technical data

Number of inserts	2 sieve package holders 1 flushing ring
Adapter for inserts	8 to 34 mm
Heating	electric heater band, 2000 W, 240 V
Rotary speed	0 - 60 min <sup>-1</sup>
Throughput	50 ... 60 cm <sup>3</sup> /min optional: 10 - 70 cm <sup>3</sup> /min
Mains connection	1 x 230 V, 50/60 Hz, +N +PE, 16 A

Subject to change of design and technical modification without notice.

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