1. Sample
   1.1 Sample
   1.2. Color: Black
   1.3. Material: Polypropylene

2. Documentation of test result
   a. Determination of melt mass-flow rate / melt volume-flow rate (MFR / MVR), according to EN ISO 1133

Tester: Melt Indexer INSTRON CEAST MF 20
Analytical balance Mettler Toledo ML204T/00

Sample preparation: Samples were pre-dried

Sample	**MFR (**190 ºC/ 2.16 kg**) [g/10 min]**	**MVR (**190 ºC/ 2.16 kg**) [cm^3 / 10min]**
PP- black	10-15	6.699

   b. Determination of density, according to EN ISO 1183 – method A

Tester: Analytical balance Mettler Toledo ML204T/00 with density kit

Testing fluid: Ethanol, 99.9 %

Sample	**Density [g/cm^3]**
PP-black	0.945 ±0,015

Note: Presence of cavities in the sample!

   c. Determination of bulk density, according to EN 15344

Tester: Apparatus for determination of bulk density with 2000ml measuring beaker

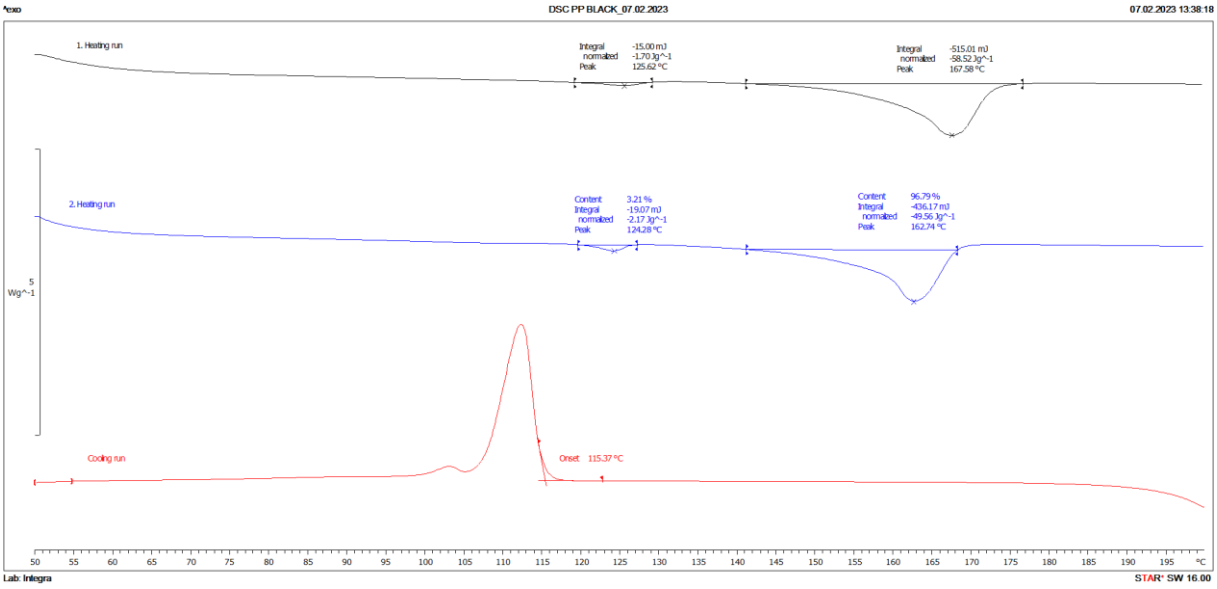
Sample	**Pm [g / ml]**
PP-black	0.52

   d. Material analysis by DSC, according to ISO 11357

Tester: Mettler Toledo DSC 3+
Analytical balance Mettler Toledo ML204T/00

Parameters: Heating run: 50 °C up to 200 °C, heating rate 10K/min
Cooling run: 200 °C down to 50 °C, Cooling rate 10K/min
Heating run: 50 °C up to 200 °C, heating rate 10K/min
Gas: Nitrogen 50ml/min
Sample pan: 40 µl Al

Sample preparation: 8.8 mg granule were used



DSC Analysis

Sample – PP Black		
Polymer	**Peak temp. in the first heat run [°C]**	**Peak temp. in the second heat run [°C]**
PE	125.62	124.28
PP	167.58	162.74

Polymer	**Content [%]**
PP	Aprox. 96-97
PE	Aprox. 3-4

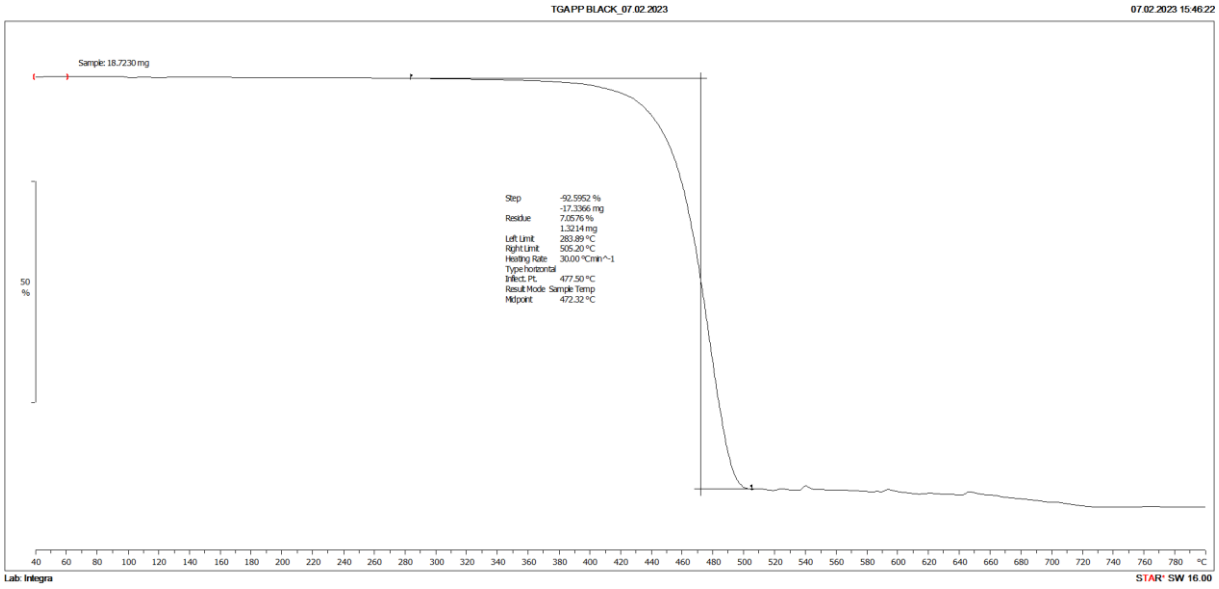
e. Material analysis by TGA

Tester: Mettler Toledo TGA 2

Parameters: Heating run: 40 °C up to 650 °C, heating rate 30K/min
Gas: Nitrogen 50ml/min
Heating run: 650 °C up to 800 °C, heating rate 30K/min
Gas: Air 50ml/min

Sample pan: 70 µl Alu Oxide

Sample preparation: 18.7230 mg granules were used



Sample – PP Black	
Ash	5.0576 %
	1.3214 mg