

**POLIS SRL  
LABORATORY ANALYSIS****Sample preparation**

Chemical and physics sample preparation, extraction, distillation etc. with the following available equipment:

<b>Instrument Type</b>	<b>International standard</b>	<b>Building</b>
Hydrolic perform press	-	Custom Build
RAM Extruded (diam.28 mm solid rod)	-	Custom Build
Lathe machine for skived tape and cut disks	-	Custom Build
Ovens for sintering billets	-	Custom Build
Lab sample mixer	-	IKA Instrument

**Physical Analysis**

<b>Instrument Type</b>	<b>International standard</b>	<b>Building</b>
Specific gravity	ASTM D 4894-98a	Mettler analytical balance with s.g. kit
Tensile Strength (MPa)	ASTM D 4894-98a	Zwick Roell Z005 Dynamometer
Elongation (%)	ASTM D 4894-98a	Zwick Roell Z005 Dynamometer
Diametric Shrinkage (RD or TD)	ASTM D 4894-98a	Mitutoyo Caliber
Longitudinal Shrinkage	ASTM D 4894-98a	Mitutoyo Caliber
Bulk Density	ASTM D 4894-98a	Custom Build
Hardness Shore D	Intern	HPE Shore D Bareiss
Granular Flow	Intern	Custom Build

## Particle size analysis

<b>Instrument Type</b>	<b>International standard</b>	<b>Building</b>
Laser Diffraction system	ISO 13320-1	Beckman Coulter LS 13320
Micro Liquid Cell - Wet system	-	Beckman Coulter LS 13320
Hegman Test	ASTM A 333 ASTM A 1210 ASTM A 1316	Grindometer
Sieve analysis	Intern	Custom Build

## Determination HF value with titration

<b>Instrument Type</b>	<b>International standard</b>	<b>Building</b>
Titration	Intern	Gastec pump set

## Chemical analysis on the Polymers

<b>Instrument Type</b>	<b>International standard</b>	<b>Building</b>
AA Atomic Absorption with Flame Emission	Chemical element analysis Heavy metal content - Mo - Fe - Cd - Zn - As - Mn - Cu	Solar AA
FT-IR Infrared Fourier Transformer analysis with ATR Diamant, diffuse reflectance, transmission etc.	Quantitative and qualitative analysis Solids analysis Liquid analysis Powder analysis Polymeric film analysis	Jasco Europe
Karl Fisher Titration	Humidity, moisture content	Mettler Toledo

## Thermo analysis

<b>Instrument Type</b>	<b>International standard</b>	<b>Building</b>
DSC Differential Scanning Calorimetry	ASTM D4591-01	TA Instrument
TGA Thermogravimetry analysis	ASTM E1131-03	TA Instrument