

production parameters. The investigation showed that in order to get multifilament yarns from PHBV copolymer the filament cooling path must be increased because the filaments fail to cool and on stretching rollers experience repeated heating, where repeated crystallisation occurs. The investigation showed that PHBV copolymer is sensitive to temperature changes. This may be the reason why the samples produced are not strong.



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# INSTITUTE OF BIOPOLYMERS AND CHEMICAL FIBRES LABORATORY OF METROLOGY

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The **Laboratory** is active in testing fibres, yarns, textiles and medical products. The usability and physico-mechanical properties of textiles and medical products are tested in accordance with European EN, International ISO and Polish PN standards.

### Tests within the accreditation procedure:

- linear density of fibres and yarns, ■ mass per unit area using small samples, ■ elasticity of yarns, ■ breaking force and elongation of fibres, yarns and medical products, ■ loop tenacity of fibres and yarns, ■ bending length and specific flexural rigidity of textile and medical products

### Other tests:

- **for fibres:** ■ diameter of fibres, ■ staple length and its distribution of fibres, ■ linear shrinkage of fibres, ■ elasticity and initial modulus of drawn fibres, ■ crimp index, ■ tenacity
- **for yarn:** ■ yarn twist, ■ contractility of multifilament yarns, ■ tenacity,
- **for textiles:** ■ mass per unit area using small samples, ■ thickness
- **for films:** ■ thickness-mechanical scanning method, ■ mechanical properties under static tension
- **for medical products:** ■ determination of the compressive strength of skull bones, ■ determination of breaking strength and elongation at break, ■ suture retention strength of medical products, ■ perforation strength and dislocation at perforation

### The Laboratory of Metrology carries out analyses for:

- research and development work, ■ consultancy and expertise

### Main equipment:

- Instron tensile testing machines, ■ electrical capacitance tester for the determination of linear density unevenness - Uster type C, ■ lanameter