

This is the first newsletter from the 'Biodegradable fibrous products' project, POIG.01.03.01-00-007/08, in which we present the most recent achievements from its realisation.

Spun-bonded nonwovens and strings for utilisation in the agriculture

Within the project the variants of Spun-bonded nonwovens and strings for utilisation in the agriculture have been developed. The variants of nonwovens were manufactured in the Institute of Biopolymers and Chemical Fibres in Łódź, with the use of the apparatus for manufacturing the spun-bonded nonwovens at a large-laboratory scale, which is a result of a project, from the commercially available polylactides selected in the initial stage. The structural and laboratory researches of the functional properties of those fibres are performed in the Department of Material and Commodity Sciences and Textile Metrology of the Technical University of Łódź. Currently in the Department of Market Gardening with Gardening Economics of the Hugon Kołłątaj Agricultural University in Cracow the field tests with utilising the developed variants of strings and nonwovens are done in order to select the most proper variants. The technology of manufacturing of the linear fibrous products in the form of yarns and strings from staple fibres and monofilaments was developed in the Department of Material and Commodity Sciences and Textile Metrology.



Prototype of the filtrating half-mask

Within the project the prototype of a filtrating half-mask was developed, which consists of:

- covering spun-bonded nonwoven from the PLA fibres manufactured by the Institute of Biopolymers and Chemical Fibres in Łódź
- biodegradable stitched constructional nonwoven manufactured by the Department of Material and Commodity Sciences and Textile Metrology from the PLA fibres manufactured by the Institute of Biopolymers and Chemical Fibres in Łódź
- biodegradable melt blown nonwoven manufactured from the commercial PLA by the Central Institute for Labour Protection
- head tapes and the nose clamp from the commercial PLA developed by the Department of Material and Commodity Sciences and Textile Metrology of the Technical University of Łódź

All of the elements are manufactured from the biodegradable materials.

According to the initial research the developed filtering half-mask has the filtration class FFP2. Currently the full research of the developed product are being conducted by the Central Institute for Labour Protection.



Laboratory of biodegradation

In the Institute of Biopolymers and Chemical Fibres in Łódź thanks to, among the others, the financing from the European Regional Development Fund the specialist biodegradation laboratory has been set off, which conducts research in the range of evaluation of the susceptibility of the polymer materials and textile products to the biological decomposition caused by the microorganisms existing in the natural environment. The biodegradation research are conducted in the laboratory in the oxygen conditions with the utilisation of innovative research methods, among the others: respirometric tests, including the measurement of a constant amount of the imparted CO₂ with the utilisation of a modern research-measurement MICRO-OXYMAX RESPIROMETER apparatus. The research are conducted in three environments: compost, soil and water in accordance with the international and European norms. The laboratory possesses an Accreditation Certificate AB 388 issued by the Polish Accreditation Centre (PCA).





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The spun-bonded technological line

In the IBWCH (the Institute of Biopolymers and Chemical Fibres) the task 'Manufacturing of the spun-bonded type nonwovens from biodegradable polymers' is realised. To the realisation of this task the research station designed and made by the Research and Development Centre of Textile Machinery „POLMATEX-Cenaro” was set off.



Promotional activities of the project:

In the first quarter of 2011 in Szklarska Poręba the Project Seminar was organised during which the products and results of its realisation from the year 2010 were presented. The substantive realisation of the project was also summarised, with the main emphasis being put on the commercialisation potential of the project's results. The entrepreneurs interested in implementing the project's results to the industrial practice attended the meeting.



XXIV CONVENTION OF THE POLISH TECHNICIANS

The convention "Technika – społeczeństwu wiedzy" ('Technics – to the knowledge society') under the auspices of Bronisław Komorowski, the President of Poland. The convention continues the 175-year tradition of the engineering movement in Poland and of the First Congress of Polish Technicians convened in 1882 in Cracow. The last pre-war Convention of the Polish Technicians took place under the auspices of Ignacy Mościcki, the President of Poland, in 1938. In an event of such rank the promotional activities of our project could not be omitted. Considering a great representation of Polish world of science and technology, business and politics that took part in the event, the actions were taken in order to fully present our undertaking. During two days the promotional division of our project gave thorough information to those who visited our stand.





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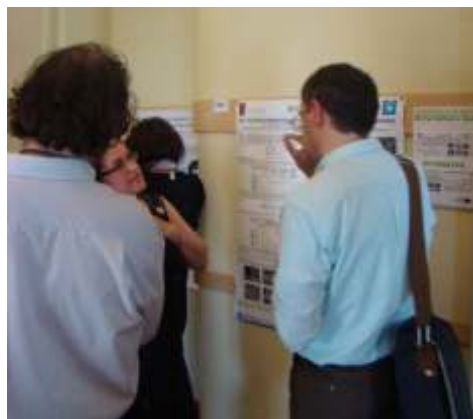
Scientific conference

The scientific employees of the Technical-Humanistic Academy in Bielsko-Biala presented the results of research works at the scientific conference: VIII International Conference on X-Ray Investigations of Polymer Structure - XIPS'2010 in Wrocław.



The EUPOC 2011 conference

The scientific employees of the Technical University of Łódź, the Department of Material and Commodity Sciences and Textile Metrology in Łódź presented the results of the research works on the scientific conference Europolymer Conference 2011 from 29th of May to 3rd of June 2011, organised by the European Polymer Association in Gargnano in Italy. The presented works concerning the application of textile products from biodegradable PLA polymer in many fields of life inscribed in the subject matter of the conference, which was the biopolymers and biomaterials.



More information about the „BIOGRATEX” project can be found on the website:

www.biogratex.pl

The most recent information concerning the realisation of the project, publication and news are presented there.

We encourage you to contact with us.

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