HUMIDITY AND WATER REGULATING ACTIVE PACKAGING. PROJECT HUMIDWRAP

The consumer quality of many market products, both industrial and food, depends to a large extent on the susceptibility to changes in ambient humidity. Excessive or too low moisture content in the product storage environment can cause negative changes such as corrosion, rapid growth of microorganisms (bacteria, mold) on the surface, drying, adverse organoleptic changes. Properly selected packaging can significantly affect the maintenance of the quality of packaged products and ultimately extend the useful life of the packaging. Protecting products through active paper and / or plastic packaging, regulates and controlling moisture changes and water content in products is the goal of the HumidWRAP project "Active packaging that regulates humidity and water content". The project is carried out by R&D units from Poland, Germany and Belgium (Wallonia) as part of the 23 CORNET competition. The national project participants are the Polish Chamber of Recycling and Packaging Recycling (PIOIRO), as the applicant and national coordinator and as contractors: Center of Bioimmobilisation and Innovative Packaging Materials of West Pomeranian University of Technology (CBIMO) and COBRO-Packaging Research Institute.
**Retail Packaging Testing**

- Physical and mechanical tests
  Contact: M. Sc., Eng. Jacek Frydrych, Tel.: +4822 8422011 int.32, e-mail: frydrychj@cobro.org.pl;

- Chemical and sensory tests
  Contact: M. Sc., Eng. Katarzyna Samsonowska, Tel.: +4822 8422011 int.27, e-mail: lab_opak_jedn@cobro.org.pl;
  PhD, Eng. Monika Kaczmarczyk, tel.: +4822 8422011 int. 42, e-mail: kaczmarczyk@cobro.org.pl

- Examination of packaging provided with closures making it difficult for children to open
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  PhD, Eng. Monika Kaczmarczyk, tel.: +4822 8422011 int. 42, e-mail: kaczmarczyk@cobro.org.pl

**Transport Packaging Testing**

- UN certification testing
- B certification testing
- Expertise testing
  Contact: M.Sc. Eng. Andrzej Milewski, tel.: +4822 8422011 int.30, e-mail: milewski@cobro.org.pl

**Certification**

**Certification for AC 016 Accreditation**

- Certification for UN
- Re-processing
- Certification of packaging protected against opening by a child
  Contact: M.Sc. Eng. Andrzej Milewski, tel.: +4822 8422011 int.30, e-mail: milewski@cobro.org.pl

**Certification Outside the Scope of Accreditation**

- Certification for B
- Certification of compliance with the requirements of standards
- Certification of products suitable for composting
  Contact: Packaging and Environment Department, tel. 22 842 20 11 int.39, e-mail: eko@cobro.org.pl

- Certification of the content of renewable raw materials
  Contact: MA Grzegorz Ganczewski, tel. (22) 842 20 11 int. 58 fax (22) 842 23 03, e-mail: ganczewski@cobro.org.pl

**Ecology**

- Assessment of conformity with the requirements of the packaging
- LCA (Life Cycle Assessment)
- Calculation of greenhouse gas emissions (carbon footprint)
- Initial assessment of compostability
- Certification of the content of renewable raw materials
- Color measurement test
- COBRO recommendation: recovery organizations
  Contact: Packaging and Environment Department, tel. 22 842 20 11 int.39, e-mail: eko@cobro.org.pl
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A BRIDGE BETWEEN
THE RESEARCH AND THE ECONOMY

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INTO THE ECONOMY

RESEARCH OF AREAS OF STRATEGIC
IMPORTANCE FOR THE COUNTRY’S
DEVELOPMENT

STRENGTHENING THE INTERNATIONAL
POSITION OF POLISH RESEARCH

RESEARCH AND ANALYTICAL
RESOURCES FOR THE POLISH
GOVERNMENT