

Packaging spectrum

BLOK NAUKOWY PRZYGOTOWANY
WE WSPÓŁPRACY Z SIECIĄ BADAWCZĄ ŁUKASIEWICZ
– COBRO – INSTYTUTEM BADAWCZYM OPAKOWAŃ



RESEARCH AND CERTIFICATION

Dominika KUBICA, ŁUKASIEWICZ – Industrial Chemistry Research Institute,
Katarzyna SAMSONOWSKA, Agnieszka KWIECIEŃ, ŁUKASIEWICZ
– COBRO – Packaging Research Institute

APPLICATION OF THE GC-MS HEADSPACE TECHNIQUE FOR THE DETERMINATION OF VOLATILE ORGANIC COMPOUNDS CONTAINED IN ARTICLES INTENDED TO COME INTO CONTACT WITH FOOD

Volatile organic compounds (VOCs), present in packaging materials intended for contact with food, can be identified and determined using gas chromatography with mass spectrometry and the headspace attachment. A procedure for quantifying volatile organic compounds has been developed as part of the research work.



The thematic scope of articles published in Packaging Spectrum includes the following sections: Materials and Packaging, Research and Certification, Technologies, Machines and Equipment, Logistics, Management and Marketing, Sozology and Law, Economics and the Market. We cordially invite you to cooperation and publication. Please contact editorial assistant Joanna Kuzinow, redakcja@cobro.org.pl



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**

Contact: M. Sc., Eng. Małgorzata Pawlicka, tel.: +4822 8422011 int. 55, e-mail: lab_opak_jedn@cobro.org.pl,
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

THE ŁUKASIEWICZ RESEARCH NETWORK EUROPE'S THIRD LARGEST RESEARCH NETWORK



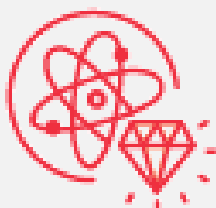
**A BRIDGE BETWEEN
THE RESEARCH AND THE ECONOMY**



**A TRANSFER OF KNOWLEDGE
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**