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Standards and measurements for accreditation of bioplastic materials and products in Europe: Determination of the aerobic biodegradability with respirometry under controlled conditions

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A certificate gives the producer of the product the right to mark it with an approved logo that is accompanied with the serial number of the certificate. In Europe, independent certificates for biodegradable plastics are issued by EU standards. Compostable plastics are a subset of biodegradable plastics that biodegrade within the conditions and timeframe of the composting process. Compostable is always biodegradable while the biodegradable material is not always compostable. European Standard EN 13432 is part of a whole series of standards prepared under a mandate from the EU to support the implementation of the Directive on Packaging and Packaging Waste (94/62/EC). One of the test methods for assessing biodegradability is ISO 14855 for determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions. With the use of respirometer, it is possible to have an accurate, fast and reliable test for biodegradable materials under aerobic composting conditions. A new type of automated analysis with the implementation of new sensor technology with intelligent software control helps users to have fast results with maximal data evaluation. The new respirometry systems can be used in government accreditation institutions, production of raw material and products as well as research faculties and institutes.

Biography

Andrej Holobar has completed his PhD at the Karl Franzens University Graz, Austria, on chemical optical sensors for bioprocesses and finished postdoctoral studies at the Biotechnical University in Ljubljana. He is the CEO for research and development in company ECHO Instruments he has founded in 1992. He leads several EU projects in the field sensors and measuring technologies in combination with robotic systems. He is also a chemical adviser in REACH and SEVESO Europe directive.

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