



AIMPLAS' Reactive Extrusion Pilot Line Is Ready to Produce Bio-based Nanomaterials for Agricultural and Food Packaging Solutions

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After two years of work, the BIOMAC project is ready to offer its services to the best European small and medium enterprises, as well as research centres working in the field of bio-nanomaterials. BIOMAC is a Horizon 2020 project fostering an Open Innovation Test Bed (OITB), a true collaborative ecosystem where technologies and solutions utilising nano-enabled bio-based materials (NBMs) are upscaled and prepared for market applications.

The BIOMAC Ecosystem provides open access to its facilities (17 pilot lines) and complementary services, covering the whole value chain, from biomass fractionation and intermediate chemicals to final NBMs. [AIMPLAS](#), the Plastics Technology Centre, is in charge of pilot line number 11, a Reactive extrusion (REX) pilot plant for polymerization of PLA and its copolymers and the production of PLA based nanocomposites.



AIMPLAS pilot line is working in two different test cases within BIOMAC project. On the one hand, in agricultural applications, to develop PLA based masterbatches with nanoparticles to be used in formulations for mulching applications, as well as PLA copolymers for injection moulding applications. And on the other hand, in food packaging solutions, to develop PLA nanocomposite formulations for blown film applications.

After the validation of the BIOMAC pilot lines through 5 internal test cases in the fields of automotive, agricultural, food packaging, construction and printed electronics industries, the project is ready to launch an open call for expressions of interest for stakeholders. The Open Call will be launched on December 15th, 2022, with the aim of selecting 5 additional test cases (textiles, medical-biomedical, tissue engineering, single used items, etc.,) utilizing

biobased nanomaterials. An official online presentation of the BIOMAC Open Call will be held on 14 December 2022. You can register to the event [here](#).

The ambition of BIOMAC is to boost and sustain innovation in the field of European bio-economy industries, by reducing the time-to-market of novel nanotechnologies, thus reducing cost and risks.

Nanostructured bio-based materials (NBM) are the answer to many challenges faced by our society. However, many technical, economical, and regulatory barriers still hinder the full deployment of bio-based polymers and nanomaterials on the market and limit the implementation of solutions based on such materials. The new Horizon2020 project BIOMAC aims at reducing these barriers and fostering the European Bioeconomy. It is one of the biggest EC-funded projects with 33 partners (academia, institutions, and companies) from 12 European countries.

Read the [original article](#) on Dairy Industries.