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ONE MAN’S TRASH IS ANOTHER MAN’S TREASURE: PILOT PLANT FOR CONVERSION OF BIOWASTE INTO BIOPRODUCTS SUCCESSFULLY LAUNCHED IN BELGIUM

The CAFIPLA consortium has been working for more than two years to find a way of converting biowaste into valuable products for the biobased industry. This week, a first batch of biowaste was successfully processed by the CAFIPLA pilot plant, the “LOOP”, in Tenneville, Belgium – a significant milestone for all project partners. In the coming six months the pilot will be used to gather all data required for further expansion to industrial scale.



Source: IDELUX

While the idea of using organic waste as abundant, renewable resource for bioproduction is not entirely new, the CAFIPLA approach is the first of its kind to combine a carboxylic acid platform (CAP) for the conversion of easily degradable biomass with a fibre recovery platform (FRP) for the valorisation of fibrous biomass. As a consequence, a broad spectrum of economically relevant bioproducts can be generated from mixed biowaste.

The project partners just accomplished the installation of the CAFIPLA pilot plant, called the “LOOP”, at the municipal biowaste treatment facility of IDELUX Environnement in Tenneville (Belgium) and successfully processed its first batch of biowaste.

This week, the 6th General Assembly of the whole CAFIPLA consortium is taking place in Belgium in order to visit the pilot and discuss the work planned for the final project period. In these upcoming months, the LOOP will convert separately collected municipal bio-waste together with locally available co-substrates to evaluate the combined performance of the two platforms CAP and FRP. First product samples from both platforms will be sent to the CAFIPLA partners for in-depth analysis and validation regarding their application potential.

With a technology readiness level of 5, the LOOP was designed to handle 10 tonnes of biowaste per year, reaching carboxylic acid and fibre yields of more than 80%. For the first half-year trial period, the CAFIPLA team aims at producing at least 250 kg of each – carboxylic acids and fibres.

In the CAFIPLA project, 12 partners from across Europe, including six SMEs, are taking up the challenge of developing a new integrated platform for the economic conversion of biowaste into higher value products. They are supported by research institutes, universities, and large industrial companies. Target products include polyhydroxyalkanoates (PHA) which can be used as biobased and biodegradable plastics or bio-composites, medium chain carboxylic acid (MCCA)-based biooils to be used as antimicrobial feed additives as well as microbial proteins serving as slow-release fertilizers or food and feed additives. The simultaneously produced reinforced natural fibres have high environmental benefits and are relevant for the insulation and construction market segments.