Active packaging: wastes from the fishing sector and MSW to have a second life as plastics, barrier packages, edible coatings and flame-retardant additives

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Organic waste generated by the fish industry and the organic fraction of municipal solid waste are a valuable resource from whose recovery new products of high added value can be obtained, such as flame-retardant additives, edible coatings with a gelatine base to extend the shelf life of fish or to be incorporated in multilayer packages, as well as chemical substances to produce bioplastics.

In order to achieve this ambitious objective, AIMPLAS has been coordinating the European project DAFIA since last January, where 14 partners take part. One of the project key objectives is to obtain new plastic materials from natural resources, such as organic wastes from households and rest raw materials from the fish industry. From substances like acids and amines, which can be produced by fermentation of the household wastes, AIMPLAS will synthesize new polyamides.

On the other hand, fish have in their spawns and semen (among others), a high content of nucleic acids that will be used as a source to produce new flame-retardant additives to be applied in high added value applications, such as those required by the automotive sector, among others.

Other substances that can be obtained from this fish rest raw materials are gelatines, to be used as an edible coating of the fish itself. This technology can prolong the shelf life of frozen fish. In addition, this gelatine and other bioactive compounds will be used in the project for the development of active packaging.

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