

Methodology for authenticating canned tuna species within 24 hours

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AZTI-Tecnalia, the R&D centre based on marine and food research, has developed a new method to authenticate canned tuna, which allows you to check if a product is albacore tuna, yellowfin or bigeye tuna, and others tuna species within 24 hours.

So far, the genetic methods for establishing proper DNA identification used to take several days to produce some conclusive results. This innovative methodology is of great interest for the canning industry and is a tool that can help to authenticate what it says on the label.

Changes in production processes have led to a revolution in the canning industry, since canned products are produced in many cases using imported frozen [tuna](#) fillets. These skinned fillets offer tremendous advantages in terms of productivity and yield of the processes, yet on occasions, in view of the difficulty in distinguishing between species visually, errors may occur in the labelling of canned products.

The DNA system developed by the Molecular Biology Laboratory at AZTI-Tecnalia for detecting various species of canned and processed tuna, has received accreditation from the National Accreditation Body (ENAC). This methodology not only offers speed in identifying species but also reliable, conclusive results. So this new method denotes a great opportunity to guarantee that products are properly labelled and to ensure quality for consumers.

Authentication methodologies for canned products are generally based

on DNA fragment detection in any kind of processed fish sample, including canned fish. These methods, known as genetic methods, are always very reliable but the downside is that it takes several days to obtain a conclusive result. However, AZTI-Tecnalia's innovative system based on fluorescent probe detection enables an accurate result within 24 hours.

DNA technology

The Molecular Biology Laboratory at AZTI-Tecnalia continues developing new methods to authenticate several marine species in order to provide effective tools for the fishing and canning industry to ensure their traceability systems. DNA technology enables specialists at the R&D centre to genetically identify Bay of Biscay anchovy and albacore tuna, among other fish. They also provide systems for authentication of Arabica coffee, cheeses under protected designation of origin, juices, and blends of meat, among other foodstuffs.

Provided by CORDIS

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