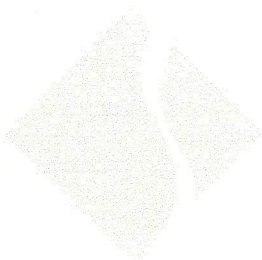


Química, análise de alimentos e análise sensorial



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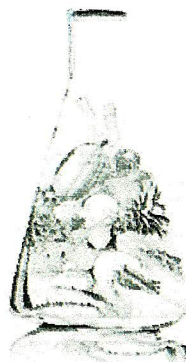


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A NEW FISH REFERENCE MATERIAL (*Micropogonias furnieri*): SUPPORT TO THE ENHANCEMENT OF CHEMICAL METROLOGY IN LATIN AMERICA

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Food safety is a major public concern worldwide. During the last decades, the increasing demand for food safety has been stimulating research regarding the risk associated with consumption of foodstuffs contaminated by pesticides, toxic elements and/or toxins. Fish is widely consumed in many parts of the world because of its nutritional value such as high protein content, low saturated fats and omega fatty acids. However, water pollution leads to fish contamination with toxic elements, from many sources, such as industrial and domestic waste water. The analysis of foodstuffs with respect to such contaminants is very important if public health and economic issues are concerned. Corresponding analytical results must be reliable and fit-for-purpose. To assure the quality of analytical results, it is fundamental to use certified reference materials for validation of analytical methods and to assure result traceability. However, certified reference materials are still not widely used in Brazil and other Latin American countries. The main reason is the high cost of these materials, since most of them are imported. The International Atomic Energy Agency (IAEA) has been supporting several projects with the objective of laboratory capability improvement in Latin America. In this context, a new IAEA project ("Improvement of analytical quality through proficiency testing and certification of matrix reference materials using nuclear and related analytical techniques in the Latin American nuclear analytical techniques network"- ARCAL RLA 2007012) has started in 2009. In this project, the Neutron Activation Laboratory (LAN) of IPEN - CNEN/SP is responsible for the preparation of a fish reference material. This reference material is intended to be used in interlaboratory programs and/or proficiency tests, as well as, for calibration of analytical instruments and validation of environmental trace element analytical methods. Whitemouth croake (*Micropogonias furnieri*), also known as *corvina*, was chosen as it is the second fish in production in Brazil and it is widely distributed and consumed in the Latin American countries. For preparation, about 300 kg of fish was collected and only the edible parts were used. A preliminary scan of the level of trace elements in the fish tissue was performed to select the most appropriate analytes for certification. After preparation, the fish reference material will be tested for homogeneity and stability and characterized by the ARCAL participating laboratories with experience in this field and possibly by expert laboratories outside Latin America.

Palavras-chave: contaminants, traceability, quality control, validation methodology, whitemouth croake, *corvina*