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Patrícia Anacleto, Vera Barbosa, Ana Maulvault, Rui Rosa, Maria Leonor Nunes, António Marques, João Paulo Noronha & Mário Sousa Diniz

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[a]LAQV-REQUIMTE, Departamento de Química, Faculdade de Ciências e Tecnologia/Universidade Nova de Lisboa, 2829-516 Caparica; [b]UCIBIO-REQUIMTE, Department of Chemistry, Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa. 2829-516 Caparica, Portugal; [c]Division of Aquaculture and Seafood Upgrading, Portuguese Institute for the Sea and Atmosphere, I.P. (IPMA). Rua Alfredo Magalhães Ramalho, 6, 1495-006 Lisboa Portugal; [d]Interdisciplinary Centre of Marine and Environmental Research (CIIMAR), Universidade do Porto. Terminal de Cruzeiros do Porto de Leixões, Avenida General Norton de Matos S/N, 4450-208 Matosinhos, Portugal; [e]MARE – Marine and Environmental Sciences Centre, Laboratório Marítimo da Guia, Faculdade de Ciências da Universidade de Lisboa. Av. Nossa Senhora do Cabo, 939, 2750-374 Cascais, Portugal

Introduction: Worldwide there is a strong requirement for food quality and safety [1], with the chemical and biological nature of hazards being the major concern. Fish degradation is a complex phenomenon where a series of events occur simultaneously, influencing each other and beginning immediately at the time of death [1]. Consequently, a reliable fish quality analysis is essential for consumer protection. Thus, the main aim of the present study was to develop an analytical approach based on sample treatment and GC-MS methodologies to detect biogenic amines as products of seafood degradation.

Materials and methods: For the GC-MS analysis two Atlantic fish species were selected (*Trachurus trachurus* and *Sarda sarda*). The fish were fileted and exposed to room temperature for 9 days (*T. trachurus*) and 13 days (*S. sarda*). Samples were collected every day and frozen (-80°C) for later analysis. Following the periods of exposure, stored samples, were homogenized in 75:25 Methanol: 0,4N HCl. Then, samples were treated and analyzed by GC-MS as described by Richard et al. [2].

Results: The results show that biogenic amines arise after two days of exposure in analysed fish samples. Following GC-MS analysis, putrescine, tyramine, spermine and spermidine emerged in two days and cadaverine and phenylethylamine after four days of exposure. However, cadaverine, spermine and spermidine decreased below LD (limit of detection) after nine days of exposure showing a different profile over exposure time.

Discussion and conclusions: The different biogenic amines profile found is compatible with the bacterial activity in sea food, namely biogenic amines which are usually produced by decarboxylation of free amino acids and transamination of aldehydes and ketones by the action of diverse microorganisms. Moreover, although GC-MS seems to be reliable technique to analyse biogenic amines in seafood samples more analysis should be performed focused on other sample treatment methodologies and cross-checking with other analytical techniques (e.g. LC-MS/MS and HPLC) until validation.

CONTACT Edgar Teixeira ✉ eh.teixeira@campus.fct.unl.pt

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Assessment of fish quality: the Quality Index Method *versus* HPLC analysis in *Sarda sarda* (Bloch, 1793)

Patrícia Anacleto[a,b,c], Vera Barbosa[a,b], Ana Maulvault[a,b], Rui Rosa[c], Maria Leonor Nunes[b], António Marques[a,b], João Paulo Noronha[a] and Mário Sousa Diniz[d]

[a]Division of Aquaculture and Seafood Upgrading, Portuguese Institute for the Sea and Atmosphere, I.P. (IPMA). Rua Alfredo Magalhães Ramalho, 6, 1495-006 Lisboa, Portugal; [b]Interdisciplinary Centre of Marine and Environmental Research (CIIMAR), Universidade do Porto. Terminal de Cruzeiros do Porto de Leixões, Avenida General Norton de Matos S/N, 4450-208, Matosinhos, Portugal; [c]MARE – Marine and Environmental Sciences Centre, Laboratório Marítimo da Guia, Faculdade de Ciências da Universidade de Lisboa. Av. Nossa Senhora do Cabo, 939, 2750-374, Cascais, Portugal; [d]UCIBIO-REQUIMTE, Department of Chemistry, Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa. 2829-516, Caparica, Portugal

Introduction: Nowadays, the evaluation of the quality of food products is fundamental to strengthen the confidence of consumers. The Quality Index Method (QIM) and analytical methodologies (e.g. HPLC, LC-MS-MS, GC-MS) are essential to ensure seafood quality and to prevent the marketability of unsafe products. Usually, the most common techniques are based on the determination of biogenic amines (BA) in seafood samples [1,2]. The main objective of the present study was to develop a sensory classification scale of seafood quality and cross-check the results with BA using Sarda sarda, an Atlantic Scombridae, as model organism.

Materials and methods: Seafood samples of fresh Sarda sarda purchased from national retailers were exposed for 13 days to controlled temperature. Afterwards, samples were daily collected for analysis. Fish samples were analyzed by the Quality Index Method (QIM) using a sensory classification scale, based on traditional organoleptic methodologies of seafood quality, and by HPLC for target biogenic amines as previously described [3–5].

Results and discussion: Immediately after one day of exposure, the quality assessment through QIM registered a decrease of fish freshness, becoming more pronounced in the following two days of exposure. As expected, over time the quality of fish analyzed deteriorated significantly. However, the results from HPLC analysis showed that in the beginning (T0), putrescine was already detected, and after five days, other biogenic amines emerged, such as histamine, tyramine, cadaverine and agmatine.

Conclusions: In conclusion, fish had good quality at the time of purchase, and it was confirmed that QIM is a quick and reliable evaluation of seafood quality as far as biogenic amines are concerned.

CONTACT Mário Sousa Diniz ✉ mesd@fct.unl.pt

Acknowledegments

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Antioxidant enzymes, HSP70 and Ubiquitin levels in *Laeonereis acuta* from the Argentinean coast

Eduardo Marques[a], Beatriz Matos[a], Maurício Díaz-Jaramillo[b] and Mário Sousa Diniz[a]

[a]UCIBIO-REQUIMTE, Department of Chemistry, Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa. 2829-516, Caparica, Portugal; [b]Instituto de Investigaciones Marinas y Costeras. IIMyC, UNMdP*CONICET, Funes 3350 (B7602AYL), Mar del Plata, Argentina

Introduction: Polychaetes have been used as indicator species of environmental contamination, utilized to assess the effects of pollutants in organisms and employed as sensitive monitors of water quality [1]. The aim of this study was to investigate the tidal- and site-dependent effects in *Laeonereis acuta* by measuring the heat shock proteins (HSP70), Ubiquitin and oxidative stress enzymes: superoxide dismutase (SOD) and catalase (CAT).

Materials and methods: The Argentinean nereidid, *L. acuta* (n = 76), were collected in the low-tide-I and high-tide-S zones of different coastal sites near *Mar del Plata*: *Samborombon*; *Quequén*; *Bahia Blanca* and *Mar Chiquita*. The samples treatment and biomarkers determination were performed following Madeira et al. [2]. The statistics analysis of the results