

Seafood Processing

Technology, Quality and Safety

Edited by
Ioannis S. Boziaris



Institute of
Food Science & Technology

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Ioannis S. Bozaris

School of Agricultural Sciences, University of Thessaly, Volos, Greece



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Seafood Processing

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Preface

Demand for fish and seafood has consistently increased during recent years and fish protein is the major animal protein consumed in many parts of the world. Seafood is a very perishable product and the risk of contamination of seafood products by biological hazards is very high. Processing is necessary to assure the prolonged shelf life and safety of seafood.

The seafood processing industry currently has to face new challenges. Production has increased and seafood products need to be transported over long distances. Increasing demands from legislation and from the consumer for better quality and safer products have to be taken into account. Seafood now has to be high quality, nutritious, safe and have the convenience of an extended shelf life. To meet these criteria, seafood processing has had to assimilate all the new advances in food science and technology and in quality and safety assurance. Current technologies have evolved rapidly (e.g. modified atmosphere packaging, minimal heat processing, rapid freezing, injection salting), while emerging technologies such as high-pressure processing are beginning to be used. Advanced quality and safety methods, such as modern and rapid techniques for assessing quality and safety, species identification techniques and risk assessment tools, all have significant applications in the seafood sector.

This book covers the whole range of technologies currently used for the main processing of seafood. Quality and safety aspects are also dealt with. The first part of the book covers primary processing, chilling and freezing, heat processing, irradiation, traditional preservation methods (salting, smoking, acidification, drying and fermentation) as well as packaging. Surimi production, fish waste treatment, sustainability and value-added seafood product development is also covered in this section. The second part of the book deals with the determination of seafood quality, microbiological examination, authenticity and risk assessment.

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