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Nota di contenuto	Handbook of Seafood Quality, Safety and Health Applications; Contents; Preface; Contributors; 1 Seafood quality, safety, and health applications: an overview; 1.1 Introduction; 1.2 Seafood quality; 1.3 Seafood safety; 1.4 Health applications of seafood; 1.5 Conclusions; References; PART I SEAFOOD QUALITY; 2 Practical evaluation of fish quality by objective, subjective, and statistical testing; 2.1 Introduction; 2.2 Methods used for fish freshness and quality assessment: from source to the consumer; 2.2.1 Latest developments in sensory methods; 2.2.2 Latest developments in non-sensory methods 2.2.2.1 Chemical/biochemical methods 2.2.2.2 Physico-chemical methods; 2.2.2.3 Microbiological/biological methods; 2.2.3 Latest developments in statistical methods; 2.2.4 Consumer testing for fish quality perception; 2.3 Potential use of micro- and nanotechnologies; 2.4 Conclusions; References; 3 Sensory evaluation of fish freshness and eating qualities; 3.1 Introduction; 3.2 Methods for sensory evaluation

of fish; 3.2.1 Torry scale; 3.2.2 European Union Scheme; 3.2.3 Quality Index Method; 3.3 Pre-harvest factors affecting freshness; 3.4 Post-harvest factors affecting freshness  
3.5 Environmental taints 3.6 Extending freshness and shelf-life in fish; 3.7 Conclusions; References; 4 Sensometric and chemometric approaches to seafood flavour; 4.1 Introduction; 4.2 Sensometric approach to seafood flavour; 4.3 Chemometric approach to seafood flavour; 4.3.1 Experimental designs and optimization; 4.3.2 Pattern recognition; 4.3.3 Multivariate regression analysis; 4.3.3.1 Green; 4.3.3.2 Grilled fish; 4.3.3.3 Fried chicken; 4.3.3.4 Cooked fish, sweet, canned tuna, and roasted soy sauce; 4.3.4 Compound-sensory mapping; 4.4 Conclusions; References  
5 Instrumental analysis of seafood flavour 5.1 Introduction; 5.2 Isolation of volatile flavour compounds; 5.2.1 Headspace sampling; 5.2.1.1 Static headspace sampling; 5.2.1.2 Dynamic headspace sampling; 5.2.1.3 Solid phase microextraction; 5.2.1.4 Sorptive extraction; 5.2.2 Solvent extraction and distillation extractions; 5.2.2.1 Direct solvent extraction; 5.2.2.2 Steam distillation extraction; 5.2.2.3 High vacuum distillation extraction; 5.3 Instrumental analysis of volatile flavour compounds; 5.3.1 Gas chromatography  
5.3.1.1 Gas chromatography-olfactometry (sensory-directed analytical techniques) 5.3.1.2 Multidimensional gas chromatography; 5.3.2 Mass spectrometry; 5.3.2.1 High resolution mass spectrometry; 5.3.2.2 Selected ion monitoring mass spectrometry; 5.3.2.3 Chemical ionization mass spectrometry; 5.3.2.4 Negative chemical ionization mass spectrometry; 5.3.2.5 Time-of-flight mass spectrometry; 5.3.3 Electronic nose; 5.4 Conclusions; References; 6 Quality assessment of aquatic foods by machine vision, electronic nose, and electronic tongue; 6.1 Introduction; 6.2 Visual quality  
6.2.1 Visual quality determination based on size and shape

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## Sommario/riassunto

The global market for seafood products continues to increase year by year. Food safety considerations are as crucial as ever in this sector, and higher standards of quality are demanded even as products are shipped greater distances around the world. The current global focus on the connection between diet and health drives growth in the industry and offers commercial opportunities on a number of fronts. There is great interest in the beneficial effects of marine functional compounds such as omega-3 polyunsaturated fatty acids. Seafoods are well-known as low calorie foods, and research continue

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