Chilling and freezing of fish

General information
State: Published
Organisations: National Food Institute, Division of Industrial Food Research, National Institute of Aquatic Resources, Public Sector Consultancy
Authors: Jessen, F. (Intern), Nielsen, J. (Intern), Larsen, E. (Intern)
Pages: 33-61
Publication date: 2014

Host publication information
Title of host publication: Seafood processing : Technology, quality and safety
Place of publication: Oxford
Publisher: Wiley-Blackwell
Editor: Boziaris, I. S.
ISBN (Print): 978-1-118-34621-1
Chapter: 3
Main Research Area: Technical/natural sciences
Publication: Research - peer-review › Book chapter – Annual report year: 2014

A model for communication of sensory quality in the seafood processing chain
Sensory quality has a key influence of consumer perception of a product. It is therefore of great importance for the processing industry that the sensory quality fulfils the expectations of the consumer. Sensory evaluations are the ultimate tool to measure and communicate sensory quality, but it is generally not fully implemented in the chain from catch to consumer. The importance of communicating sensory demands and results from evaluations in the seafood processing chain is described and a Seafood Sensory Quality Model (SSQM) is suggested as a communication tool.
A study of traceability and quality assurance in fish supply chains

General information
State: Published
Organisations: National Food Institute, Division of Industrial Food Research, Department of Management Engineering
Authors: Rasmussen, M. R. (Intern), Nielsen, J. (Intern), Frederiksen, M. T. (Intern), Clausen, J. (Intern), Jørgensen, B. M. (Intern)
Number of pages: 154
Publication date: 2012

Publication information
Place of publication: Søborg
Publisher: DTU Food
Original language: English
Main Research Area: Technical/natural sciences
Electronic versions:
ph.d._afhandling_mariarandruprasmussen.pdf
Publication: Research › Ph.D. thesis – Annual report year: 2013

Quality of frozen fish

General information
State: Published
Organisations: National Food Institute, Division of Industrial Food Research
Authors: Goncalves, A. A. (Ekstern), Nielsen, J. (Intern), Jessen, F. (Intern)
Pages: 479-509
Publication date: 2012

Host publication information
Title of host publication: Handbook of meat, poultry & seafood quality
Publisher: Wiley-Blackwell
Edition: 2
ISBN (Print): 978-0470958322
Chapter: 31
Main Research Area: Technical/natural sciences
Electronic versions:
Quality of frozen seafood Goncalves Jette Flemming.pdf

Bibliographical note
Book chapter
Source: dtu
Source-ID: u::5860
Publication: Research - peer-review › Book chapter – Annual report year: 2012

Sensory and quality properties of fresh, frozen and packaged fish

General information
State: Published
Organisations: National Food Institute, Division of Industrial Food Research
Authors: Hyldig, G. (Intern), Nielsen, J. (Intern), Jacobsen, C. (Intern), Nielsen, H. H. (Intern)
Pages: 154-170
Publication date: 2012

Host publication information
Title of host publication: Advances in meat, poultry and seafood packaging
Publisher: Woodhead Publishing
Editor: Kerry, J. P.
ISBN (Print): 978-1845697518
Main Research Area: Technical/natural sciences
Source: dtu
Source-ID: u::5746
Chemical processes responsible for quality deterioration in fish

General information
State: Published
Organisations: Section for Aquatic Lipids and Oxidation, National Institute of Aquatic Resources, Section for Aquatic Protein Biochemistry, Section for Aquatic Process and Product Technology
Authors: Jacobsen, C. (Intern), Nielsen, H. H. (Intern), Jørgensen, B. (Intern), Nielsen, J. (Intern)
Number of pages: 824
Pages: 439-465
Publication date: 2010

Host publication information
Title of host publication: Chemical deterioration and physical instability of food and beverages
Volume: Part 2
Publisher: British Welding Research Association
Editors: Andersen, M., Skibsted, L.
ISBN (Print): 9781845694951
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 253226
Publication date: 2010

Cod and rainbow trout as freeze-chilled meal elements
Meal elements are elements of a meal, e.g. portions of pre-fried meat, sauces, frozen fish or pre-processed vegetables typically prepared industrially. The meal elements are distributed to professional satellite kitchens, where the staff can combine them into complete meals. Freeze-chilling is a process consisting of freezing and frozen storage followed by thawing and chilled storage. Combining the two would enable the manufacturer to produce large quantities of frozen meal elements to be released into the chill chain according to demand. We have studied the influence of freeze-chilling on the quality attributes of cod and rainbow trout portions. Sensory profiling and chemical analyses were used to determine the changes in quality after slow thawing and subsequent chill storage and to find the high-quality shelf life. RESULTS: Cod had a consistent and high sensory quality during the first 6 days of chilled storage, and the corresponding time for rainbow trout was 10 days. After this period the sensory quality decreased and chemical indicators of spoilage were seen to increase. CONCLUSION: The consistent quality during storage and the high-quality shelf life are practically applicable and cod and rainbow trout seem potential candidates for freeze-chilled meal elements. (C) 2009 Society of Chemical Industry

General information
State: Published
Organisations: Materials and Surface Engineering, National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Jensen, L. H. S. (Intern), Nielsen, J. (Intern), Jørgensen, B. (Intern), Frosch, S. (Intern)
Pages: 376-384
Publication date: 2010
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of the Science of Food and Agriculture
Volume: 90
Issue number: 3
ISSN (Print): 0022-5142
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.48 SJR 0.87 SNIP 1.222
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.813 SNIP 1.088 CiteScore 2.11
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Sensory quality of seafood – in the chain from catch to consumption

General information
State: Published
Organisations: Division of Seafood Research, National Food Institute
Authors: Green-Petersen, D. (Intern), Jørgensen, B. (Intern), Nielsen, J. (Intern), Hyldig, G. (Intern)
Number of pages: 166
Publication date: 2010

Publication information
Place of publication: Kgs. Lyngby, Denmark
The fish industry - toward supply chain modelling

Mathematical models for simulating and optimizing aspects of supply chains such as distribution, planning, and optimal handling of raw materials are widely used. However, modeling based on a holistic chain view including several or all supply chain agents is less studied, and food-related aspects such as quality and shelf-life issues enforce additional requirements onto the chains. In this article, we consider the supply chain structure of the fish industry. We discuss and illustrate the potential of using mathematical models to identify quality and value-adding activities. The article provides a first step toward innovative supply chain modeling aimed to identify benefits for all agents along chains in the fish industry.

General information

State: Published
Organisations: Operations Research, Department of Management Engineering, Division of Seafood Research, National Food Institute, Section for Public Sector Consultancy, National Institute of Aquatic Resources
Authors: Jensen, T. K. (Intern), Nielsen, J. (Intern), Larsen, E. (Intern), Clausen, J. (Intern)
Pages: 214-226
Publication date: 2010
Main Research Area: Technical/natural sciences

Publication information

Journal: Journal of Aquatic Food Product Technology
Volume: 19
Issue number: 3-4
ISSN (Print): 1049-8850
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 0.59 SJR 0.268 SNIP 0.582
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.298 SNIP 0.623 CiteScore 0.65
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.275 SNIP 0.632 CiteScore 0.62
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.281 SNIP 0.558 CiteScore 0.59
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.429 SNIP 0.545 CiteScore 0.64
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.385 SNIP 0.621 CiteScore 0.68
ISI indexed (2011): ISI indexed no
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.282 SNIP 0.34
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.197 SNIP 0
Freeze-chilling af fisk til brug som måltidselementer

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources
Authors: Jensen, L. (Ekstern), Nielsen, J. (Intern), Jørgensen, B. (Intern), Frosch, S. (Intern)
Publication date: 2009
Event: Poster session presented at Forskningsdøgn, København, .
Main Research Area: Technical/natural sciences

On the track of fish in three distribution networks

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Food Institute, National Institute of Aquatic Resources, Division of Seafood Research
Authors: Randrup, M. (Intern), Wu, H. (Intern), Nielsen, J. (Intern)
Number of pages: 36
Publication date: 2009

Host publication information
Main Research Area: Technical/natural sciences
Conference: 3rd Joint Trans-Atlantic Fisheries Technology Conference, Copenhagen, Denmark, 15/09/2009 - 15/09/2009
Fish products, Traceability, Tracking
Source: orbit
Source-ID: 255886
Publication: Research › Conference abstract in proceedings – Annual report year: 2009
Quality effect of freeze-chilling in cod and rainbow trout

'Meal elements' is the name of a concept in which elements of a meal, e.g. portions of pre-fried meat, sauces, fish or pre-processed vegetables are prepared industrially. The meal elements are distributed to professional satellite kitchens for instance in hospitals and canteens, where the kitchen staff combines the different meal components to a complete meal.

Freeze-chilling is a process consisting of freezing and frozen storage followed by thawing and chilled storage and could be an ideal technique to combine with the concept of meal elements. Freeze-chilling would enable manufacturers to produce large quantities of frozen meal elements to be released into the chill chain according to market demands. This procedure would allow the products to thaw during transport, and by arrival the thawed meal elements would be ready for use or chill storage.

We have studied the influence of freeze-chilling on the quality of raw fish portions as an example of a meal element. The thawing of frozen products during transport was mimicked by placing cardboard boxes with frozen, vacuum packaged portions of fish in a chilling facility and allowing them to thaw slowly. To mimic possible subsequent chill storage at the satellite kitchens the quality was also followed during a storage period. The quality changes were evaluated on the basis of the results from descriptive sensory analysis and analysis of different chemical parameters. The high quality shelf life was determined from these results. As the quality changes are known to differ among fish species, the present study included the popular species cod (Gadus Morhua) and rainbow trout (Oncorhynchus Mykiss).

Principal component analysis of the sensory results clearly showed that after frozen storage at -30 °C for 1 month and subsequent chill storage at +2 °C, trout had a shelf life of approximately 10 days as a high quality product which was perceived indistinctly from the freshly thawed samples by the sensory panel. The corresponding high quality shelf life for cod was 6 days.

In conclusion, the consistent quality during storage and the high quality shelf life is practically applicable and cod and rainbow trout seem potential candidates for freeze-chilled meal elements.

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Jensen, L. H. S. (Intern), Nielsen, J. (Intern), Jørgensen, B. (Intern), Frosch, S. (Intern)
Publication date: 2009
Event: Poster session presented at 3rd Joint Trans-Atlantic Fisheries Technology Conference, Copenhagen, Denmark.
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 252908
Publication: Research › Poster – Annual report year: 2009

The Danish fishing industry - towards supply chain modelling

General information
State: Published
Organisations: Operations Research, Department of Management Engineering, National Food Institute, National Institute of Aquatic Resources
Authors: Jensen, T. K. (Intern), Nielsen, J. (Intern), Larsen, E. (Intern), Clausen, J. (Intern)
Publication date: 2009

Host publication information
Title of host publication: Book of Abstracts of the Joint Trans-Atlantic Fisheries Technology Conference
Main Research Area: Technical/natural sciences
Conference: 3rd Joint Trans-Atlantic Fisheries Technology Conference, Copenhagen, Denmark, 15/09/2009 - 15/09/2009
Source: orbit
Source-ID: 265044
Publication: Research › Conference abstract in proceedings – Annual report year: 2009

The quality of cold smoked salmon: Influence of raw material and technological parameters

The objective of this Ph. D. thesis was to study the liquid holding capacity/liquid loss of raw and smoked salmonids as affected by raw material and chill storage of the cold smoked product. The liquid holding capacity is an important quality parameter for cold smoked salmon. This study has shown that the liquid holding capacity in raw and cold smoked salmon is influenced by several factors. The size of the fish affected the liquid holding capacity as large fish had lower liquid holding capacity than smaller fish. The salt content influenced the liquid holding capacity in smoked fish as it was found that high salt content gave higher liquid holding capacity. The salt uptake of the fillets was affected by the lipid content as a high lipid content lead to a lower salt content. It was also found that the lipid content increased with the size of the fish.
The lipid content affected the liquid holding capacity in raw salmon, as high lipid content gave lower liquid holding capacity. Thus, the lipid content is an important parameter regarding the liquid holding capacity as it can influence the liquid holding capacity directly or indirectly by affecting other factors e.g. the salt content which influences the liquid holding capacity. During the chill storage period of smoked salmon, the liquid holding capacity decreased. It was found that the large smoked salmon lost more liquid than the small smoked salmon did during chill storage. At the same time the lipid fraction of the liquid loss increased while the water fraction remained at a constant level. The decrease in the liquid holding capacity during chill storage of the smoked product was related to changes in the water distribution. Three water pools were found in raw and smoked salmon samples. An exchange of water from pool II to pool I was seen during chill storage of smoked salmon. The microstructure of the fish muscle was affected by the smoking process and the subsequent chill storage. An indication of lipid droplets being released was observed during the chill storage period, which could indicate denaturation of the collagen structure in the muscle. Several methods for measuring the liquid holding capacity in fatty fish have been used. A comparison of two of the methods, a centrifugation method and a liquid leakage test, was made. The investigation showed that the two methods measure different parameters, and that the two methods cannot substitute each other and the methods may have different applications. Both methods are highly dependent on experimental conditions. It is recommended that both types of methods are used in order to get a detailed picture as possible of the liquid holding capacity. NMR relaxation curves were used to investigate the relation between the centrifugation method and the liquid leakage test. A high correlation was found between NMR relaxation curves and the liquid holding capacity measured by the centrifugation method for both rainbow trout and salmon. Thus, the low-field NMR technique has potential as a fast and non-destructive method to measure liquid holding capacity in fatty fish. In conclusion, this study has shown that raw material and chill storage of the smoked product affected the liquid holding capacity. Thus, the producers of cold smoked salmon should be aware of this and should have a careful control of the raw material especially regarding the lipid content.

General information
State: Published
Organisations: Food Production Engineering, Department of Systems Biology
Authors: Løje, H. (Intern), Nielsen, J. (Intern)
Number of pages: 100
Publication date: Jul 2007

Publication information
Original language: English
Main Research Area: Technical/natural sciences
Electronic versions:
PhD-afhandling_220507.pdf
Source: orbit
Source-ID: 201777
Publication: Research › Ph.D. thesis – Annual report year: 2007

Changes in liquid-holding capacity, water distribution and microstructure during chill storage of smoked salmon

General information
State: Published
Organisations: Division of Food Production Engineering, National Food Institute, Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources, Section for Aquatic Protein Biochemistry
Authors: Løje, H. (Intern), Jensen, K. (Ekstern), Hyldig, G. (Intern), Nielsen, H. H. (Intern), Nielsen, J. (Intern)
Pages: 2684-2691
Publication date: 2007
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of the Science of Food and Agriculture
Volume: 87
Issue number: 14
ISSN (Print): 0022-5142
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.48 SJR 0.87 SNIP 1.222
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Frossen fisk - ikke så ringe endda

General information
State: Published
Organisations: Division of Food Production Engineering, National Food Institute, Division of Seafood Research
Authors: Jørgensen, S. B. (ed.) (Intern), Nielsen, J. (Intern)
Publication date: 2007
Main Research Area: Technical/natural sciences

Publication information
Journal: FoodDTU Midt i Ugen
Original language: Danish
Source: orbit
Source-ID: 258742
Publication: Communication › Journal article – Annual report year: 2007

Quality of frozen fish

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources, Section for Aquatic Protein Biochemistry
Authors: Nielsen, J. (Intern), Jessen, F. (Intern)
Number of pages: 744
Pages: 577-586
Publication date: 2007

Host publication information
Title of host publication: Handbook of meat, poultry & seafood quality
Volume: VII:44
Place of publication: Oxford
Publisher: Blackwell Publishing Ltd
ISBN (Print): 08-13-82446-X
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 226868
Publication: Research - peer-review › Book chapter – Annual report year: 2007

Water distribution in smoked salmon

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Løje, H. (Intern), Green-Petersen, D. (Intern), Nielsen, J. (Intern), Jørgensen, B. (Intern), Jensen, K. N. (Intern)
Pages: 212-217
Publication date: 2007
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of the Science of Food and Agriculture
Volume: 87
Issue number: 2
ISSN (Print): 0022-5142
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.48 SJR 0.87 SNIP 1.222
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.813 SNIP 1.088 CiteScore 2.11
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.819 SNIP 1.153 CiteScore 2.1
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.846 SNIP 1.224 CiteScore 2.22
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.891 SNIP 1.129 CiteScore 1.9
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.757 SNIP 1.003 CiteScore 1.61
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.775 SNIP 0.894
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.86 SNIP 1.054
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 0.751 SNIP 0.838
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 0.732 SNIP 1.14
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.704 SNIP 0.963
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 0.565 SNIP 0.89
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.621 SNIP 0.914
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 0.797 SNIP 1.142
Scopus rating (2002): SJR 0.864 SNIP 1.166
Scopus rating (2001): SJR 0.795 SNIP 0.976
Web of Science (2001): Indexed yes
Scopus rating (2000): SJR 0.61 SNIP 1.063
Web of Science (2000): Indexed yes
Scopus rating (1999): SJR 0.841 SNIP 1.335
Original language: English
Sensory profiles of the most common salmon products on the Danish market

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources
Authors: Green-Petersen, D. (Intern), Nielsen, J. (Intern), Hyldig, G. (Intern)
Pages: 415-427
Publication date: 2006
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of Sensory Studies
Volume: 21
Issue number: 4
ISSN (Print): 0887-8250
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 1.82 SJR 0.669 SNIP 0.968
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.69 SNIP 0.99 CiteScore 2.18
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.996 SNIP 1.181 CiteScore 2.28
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 1.128 SNIP 1.253 CiteScore 2.61
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.742 SNIP 1.203 CiteScore 2.08
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.903 SNIP 1.012 CiteScore 1.56
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.668 SNIP 1.071
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.576 SNIP 0.804
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.467 SNIP 0.919
Scopus rating (2007): SJR 0.456 SNIP 0.533
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.534 SNIP 0.674
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 0.41 SNIP 0.875
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.69 SNIP 0.918
Scopus rating (2003): SJR 0.74 SNIP 0.771
Lipid content in herring (Clupea harengus L.) - influence of biological factors and comparison of different methods of analyses: solvent extraction, Fatmeter, NIR and NMR

General information
State: Published
Organisations: Department of Systems Biology, Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources, Section for Aquatic Protein Biochemistry
Authors: Nielsen, D. (Intern), Hyldig, G. (Intern), Nielsen, J. (Intern), Nielsen, H. H. (Intern)
Pages: 537-548
Publication date: 2005
Main Research Area: Technical/natural sciences

Publication information
Journal: LWT - Food Science and Technology
Volume: 38
Issue number: 5
ISSN (Print): 0023-6438
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.31
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 3.11
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 3.12
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 3.11
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 3.12
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 3.18
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
BFI (2009): BFI-level 1
BFI (2008): BFI-level 2
Web of Science (2008): Indexed yes
Web of Science (2005): Indexed yes
Liquid holding capacity and instrumental and sensory texture properties of herring (Clupea harengus L.) related to biological and chemical parameters

General information
State: Published
Organisations: Department of Systems Biology, Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources, Section for Aquatic Protein Biochemistry
Authors: Nielsen, D. (Intern), Hyldig, G. (Intern), Nielsen, J. (Intern), Nielsen, H. H. (Intern)
Pages: 119-138
Publication date: 2005
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of Texture Studies
Volume: 36
Issue number: 2
ISSN (Print): 0022-4901
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.655 SNIP 0.963 CiteScore 1.75
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.562 SNIP 0.896 CiteScore 1.43
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.726 SNIP 0.904 CiteScore 1.82
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.731 SNIP 1.014 CiteScore 1.56
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.661 SNIP 0.854 CiteScore 1.18
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.533 SNIP 0.85 CiteScore 1.01
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.518 SNIP 0.648
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.733 SNIP 1.151
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.769 SNIP 1.009
Scopus rating (2007): SJR 0.637 SNIP 0.955
Scopus rating (2006): SJR 0.276 SNIP 0.528
Scopus rating (2005): SJR 0.391 SNIP 0.644
Sensory properties of marinated herring (Clupea harengus) processed from raw material from commercial landings

Sensory properties of marinated herring processed from raw material from Danish commercial catches were described and related to fishing season and biological, chemical and functional properties. Herring was caught on five cruises and stored on board in tanks or ice. The sensory profile of marinated herring from the North Sea was influenced by season, and changes coincided with the cycle of feeding and spawning. During the spawning period the texture was soft and the muscle more susceptible to lipid oxidation. The texture became firmer and the fatty mouth feel stronger during the feeding period, and the odour and flavour characteristics less rancid. These effects were explained by the chemical composition and biological parameters. The sensory profile was influenced by herring size and age, but not by sex or gonad maturity; the storage method also had an effect. Herring from the Kattegat stored in ice smelled and tasted more of fresh herring and were juicier than herring from the North Sea stored in tanks. (C) 2004 Society of Chemical Industry

General information
State: Published
Organisations: Department of Systems Biology, Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources, Section for Aquatic Protein Biochemistry
Authors: Nielsen, D. (Intern), Hyldig, G. (Intern), Nielsen, J. (Intern), Nielsen, H. H. (Intern)
Pages: 127-134
Publication date: 2005
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of the Science of Food and Agriculture
Volume: 85
Issue number: 1
ISSN (Print): 0022-5142
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.48 SJR 0.87 SNIP 1.222
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.813 SNIP 1.088 CiteScore 2.11
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.819 SNIP 1.153 CiteScore 2.1
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.846 SNIP 1.224 CiteScore 2.22
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.891 SNIP 1.129 CiteScore 1.9
Water distribution and mobility in herring muscle in relation to lipid content, season, fishing ground and biological parameters

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology, Section for Aquatic Protein Biochemistry
Authors: Jensen, K. N. (Intern), Jørgensen, B. (Intern), Nielsen, H. H. (Intern), Nielsen, J. (Intern)
Pages: 1259-1267
Publication date: 2005
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of the Science of Food and Agriculture
Volume: 85
Issue number: 8
ISSN (Print): 0022-5142
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Kan forbrugeren få friske fisk fra frysedisken

General information
QIM - a tool for determination of fish freshness

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources
Authors: Hyldig, G. (Intern), Nielsen, J. (Intern)
Pages: 81-89
Publication date: 2004
Host publication information
Title of host publication: Seafood Quality and Safety. Advances in the New Millennium
Place of publication: St John's, NL
Publisher: ScienceTech Publishing Company
Editors: Shahidi, F., Simpson, B.
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 225845
Publication: Research - peer-review › Book chapter – Annual report year: 2004

Sensory properties of marinated herring (Clupea harengus) - influence of fishing ground and season
The sensory properties of marinated herring produced immediately post mortem of raw material from different fishing ground and seasons were described and related to biological, biochemical and functional properties. Subtle variation was encountered in the appearance of whole marinated herring fillets. Fishing ground did not influence the odor, flavor or texture, but there was an apparent effect of season on the sensory profile. The sensory properties were influenced by body weight, but not by age, sex and gonad maturity. The influence of varying lipid content, water content and liquid holding capacity resulted in similar effects showing the high correlation between these properties. The results indicated that variation in sensory quality observed by the industry is not primarily due to the parameters fishing ground and season
A consumer view of frozen fish

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources
Authors: Nielsen, J. (Intern), listov-Saabye, F. (Ekstern), Jensen, K. N. (Intern)
Number of pages: 400
Publication date: 2003

Host publication information
Title of host publication: TAFT 2003: First joint trans Atlantic fisheries technology conference, 10-14 June 2003 Reykjavik, Iceland: 33rd WEFTA meeting
Place of publication: Reykjavik
Publisher: The Icelandic Fisheries Laboratories
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 229320
Publication: Research › Article in proceedings – Annual report year: 2003

Frisk fisk fra fryseren - Ny viden om kvaliteten af frossen fisk

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources
Authors: Nielsen, J. (Intern), Jakobsen, G. (Ekstern)
Number of pages: 15
Publication date: 2003

Publication information
Place of publication: Højmark
Publisher: Højmarkslaboratoriet
Original language: Danish
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 226862
Publication: Research › peer-review › Book – Annual report year: 2003

Højkvalitets frossen fisk - en mulighed

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources
Authors: Nielsen, J. (Intern), Listov-Saabye, F. (Ekstern)
Pages: 4-5
Publication date: 2003
Main Research Area: Technical/natural sciences

Publication information
Journal: Alimenta
Volume: 26
Issue number: 9
ISSN (Print): 1395-1718
Low-temperature transitions in cod and tuna determined by differential scanning calorimetry

Differential scanning calorimetry measurements have revealed different thermal transitions in cod and tuna samples. Transition temperatures detected at -11°C, -15°C, and -21°C were highly dependent on the annealing temperature. In tuna muscle an additional transition was observed at -72°C. This transition appeared differently than the thermal events observed at higher temperatures, as it spanned a broad temperature interval of 25°C. The transition was comparable to low-temperature glass transitions reported in protein-rich systems. No transition at this low temperature was detected in cod samples. The transitions observed at higher temperatures ( -11°C to -21°C) may possibly stem from a glassy matrix containing muscle proteins. However, the presence of a glass transition at -11°C was in disagreement with the low storage stability at -18°C during practical time scales. It was proposed that freezing of cod could be associated with more than one glass transition. With a glass transition at a temperature lower than -11°C being too small to be detectable with instrument. Yet governing important deterioration processes. In order to optimize frozen storage conditions, the relationship between deterioration processes important for preservation of quality and glass transition temperatures still needs to be established. (C) 2003 Swiss Society of Food Science and Technology. Published by Elsevier Science Ltd. All rights reserved.
Sensory properties of herring - Influence of fishing ground and season

General information
State: Published
Organisations: Department of Systems Biology, Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources, Section for Aquatic Protein Biochemistry
Authors: Nielsen, D. (Intern), Hyldig, G. (Intern), Nielsen, H. H. (Intern), Nielsen, J. (Intern)
Pages: 129-131
Publication date: 2003
Main Research Area: Technical/natural sciences

Publication information
Original language: English
Source: orbit
Source-ID: 225988
Publication: Research - peer-review › Journal article – Annual report year: 2003

Eating quality of fish - a review

General information
State: Published
God og dårlig frosset fisk - hvorfor er der en forskel?

General information
State: Published
Organisations: Section for Aquatic Protein Biochemistry, National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Jessen, F. (Intern), Nielsen, J. (Intern)
Pages: 16-25
Publication date: 2002
Main Research Area: Technical/natural sciences

Publication information
Journal: Fisk og Hav
Issue number: 54
ISSN (Print): 0105-9211
Ratings:
ISI indexed (2013): ISI indexed no
ISI indexed (2012): ISI indexed no
ISI indexed (2011): ISI indexed no
Original language: Danish
Links:
Source: orbit
Source-ID: 226042
Publication: Research › Journal article – Annual report year: 2002

Physiological characterisation of recombinant Aspergillus nidulans strains with different creA genotypes expressing A-oryzae alpha-amylase

The physiology of three strains of Aspergillus nidulans was examined-a creA deletion strain, a wild type creA genotype and a strain containing extra copies of the creA gene, all producing Aspergillus oryzae alpha-amylase. The strains were cultured in batch and continuous cultivations and the biomass formation and alpha-amylase production was characterised. Overexpression of the creA gene resulted in a lower maximum specific growth rate and a slightly higher repression of the alpha-amylase production during conditions with high glucose concentration. No expression of creA also resulted in a decreased maximum specific growth rate, but also in drastic changes in morphology. Furthermore, the expression of alpha-amylase was completely derepressed and creA thus seems to be the only regulatory protein responsible for glucose repression of alpha-amylase expression. The effect of different carbon sources on the alpha-amylase production in the creA deletion strain was investigated and it was found that starch was the best inducer. The degree of induction by starch increased almost linearly with the concentration of starch in starch/glucose mixtures. High-density batch cultivation was performed with the creA deletion strain and a final titre of 6.0 g l(-1) of alpha-amylase was reached after 162 h of cultivation.

General information
State: Published
Organisations: Department of Biotechnology, Department of Systems Biology
Authors: Agger, T. (Intern), Petersen, J. (Ekstern), O’Connor, S. (Ekstern), Murphy, R. (Ekstern), Kelly, J. (Ekstern), Nielsen, J. (Intern)
Pages: 279-285
Publication date: 2002
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of biotechnology
Volume: 92
Issue number: 3
ISSN (Print): 0168-1656
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Source: orbit
Source-ID: 22208
Publication: Research - peer-review → Journal article – Annual report year: 2002
Reciprocal C-13-labeling: A method for investigating the catabolism of cosubstrates

The principle of reciprocal labeling is to use a uniformly C-13-labeled substrate as the primary carbon source and a naturally labeled cosubstrate. Metabolites derived from a naturally labeled cosubstrate, in this case amino acids, can then be identified by their relatively lower content of C-13, and information on the degradation pathway can be deduced. The technique is based on GC-MS measurements of amino acid labeling patterns, making the technique well suited for investigating the relative importance of amino acid biosynthesis and amino acid uptake from the medium, as the 13C content of the amino acids incorporated into biomass is a direct measure of the amino acid biosyntheses. The technique is illustrated by the investigation of the degradation of phenoxyacetic acid, a medium component that is essential for production of penicillin V by Penicillium chrysogenum. Glucose was used as the uniformly labeled primary carbon source.

General information
State: Published
Organisations: Department of Systems Biology
Authors: Christensen, B. (Ekstern), Nielsen, J. (Intern)
Pages: 163-166
Publication date: 2002
Main Research Area: Technical/natural sciences

Publication information
Journal: Biotechnology progress
Volume: 18
Issue number: 2
ISSN (Print): 8756-7938
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.12 SJR 0.668 SNIP 0.762
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.727 SNIP 0.825 CiteScore 2.07
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.808 SNIP 0.931 CiteScore 2.2
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.764 SNIP 0.847 CiteScore 2.16
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.84 SNIP 0.868 CiteScore 2.35
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.918 SNIP 0.956 CiteScore 2.4
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.988 SNIP 0.947
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.965 SNIP 1.047
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.887 SNIP 0.992
Scopus rating (2007): SJR 1.011 SNIP 1.093
The purpose of the present study was to select key parameters in good manufacturing practice for production of thawed chilled modified atmosphere packed (MAP) cod (Gadus morhua) fillets. The effect of frozen storage temperature (-20 and -30 C), frozen storage period (3, 6, 9 and 12 mo) and chill storage periods up to 21 d at 2 C were evaluated for thawed MAP Barents Sea cod fillets. Sensory, chemical, microbiological and physical quality attributes were evaluated and multivariate data analysis (principal component analysis and partial least- squares regression) applied for identification of key parameters in good manufacturing practice for this product. Frozen storage of up to 12 mo had no significant effect on quality attributes and shelf-life at 2 degreesC was above 14 d irrespective of the time of frozen storage. As compared to a previous study with Baltic Sea, cod drip losses during chill storage was low for thawed MAP Barents Sea cod and this fish raw material seemed the more appropriate for production of thawed chilled MAP products. Frozen storage inactivation of the spoilage bacteria of Photobacterium phosphorum was modest in Barnets Sea cod, possibly due to high trimethylamine oxide (TMAO) and NaCl contents.

**General information**

State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology, Section for Aquatic Microbiology and Seafood Hygiene
Authors: Bøknæs, N. (Intern), Jensen, K. (Ekstern), Guldager, H. (Ekstern), Østerberg, C. (Intern), Nielsen, J. (Intern), Dalgaard, P. (Intern)
Pages: 436-443
Publication date: 2002
Main Research Area: Technical/natural sciences
The simultaneous biosynthesis and uptake of amino acids by Lactococcus lactis studied by C-13-labeling experiments

Uniformly C-13 labeled glucose was fed to a lactic acid bacterium growing on a defined medium supplemented with all proteinogenic amino acids except glutamate. Aspartate stemming from the protein pool and from the extracellular medium was enriched with C-13 disclosing a substantial de novo biosynthesis of this amino acid simultaneous to its uptake from the growth medium and a rapid exchange flux of aspartate over the cellular membrane. Phenylalanine, alanine, and threonine were also synthesized de novo in spite of their presence in the growth medium.

General information
State: Published
Organisations: Department of Systems Biology
Authors: Jensen, N. (Ekstern), Christensen, B. (Ekstern), Nielsen, J. (Intern), Villadsen, J. (Intern)
Pages: 11-16
Publication date: 2002
Main Research Area: Technical/natural sciences

Publication information
Journal: Biotechnology and bioengineering
Volume: 78
Issue number: 1
ISSN (Print): 0006-3592
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 4.14 SJR 1.411 SNIP 1.163
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Chilling and freezing of fish and fishery products

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources, Section for Aquatic Protein Biochemistry
Authors: Nielsen, J. (Intern), Larsen, E. (Intern), Jessen, F. (Intern)
Effects of Technological Parameters and Fishing Ground on Quality Attributes of Thawed, Chilled Cod Fillets Stored in Modified Atmosphere Packaging

Effects were studied of various technological parameters and fishing ground on quality attributes of thawed, chilled cod fillets stored in modified atmosphere packaging. Frozen fillets of Baltic Sea and Barents Sea cod, representing two commercial fishing grounds, were used as raw material. The parameters investigated were: (1) packaging in modified atmosphere during frozen storage, (2) frozen storage period and temperature, (3) fishing ground and chill storage temperature, together with (4) the addition of trimethylamine oxide (TMAO) and sodium chloride (NaCl) to cod fillets before freezing or after freezing and thawing. Application of MAP during frozen storage resulted in a significant increase in the drip loss of thawed, chilled MAP cod fillets but none of the other quality attributes studied were influenced by this treatment. This implies that packaging cod fillets without MAP during frozen storage is more appropriate for manufacturing of thawed chilled MAP cod fillets. During chill storage of thawed MAP Barents Sea fillets previously kept at -30°C for 15 weeks, significant growth of Photobacterium phosphoreum and production of trimethylamine were observed. On the contrary, P. phosphoreum growth and trimethylamine production in thawed and chill-stored MAP Baltic Sea cod fillets were strongly inhibited after as little as 4 weeks of frozen storage at -30°C. Contents of trimethylamine oxide and NaCl were substantially higher in fillets of Barents Sea cod compared to fillets of Baltic Sea cod. Therefore, addition of trimethylamine oxide and NaCl to Baltic Sea cod fillets was evaluated and shown to protect P. phosphoreum against freezing inactivation and this explained the observed differences in growth of the spoilage bacteria and trimethylamine production between thawed and chill stored MAP fillets from the two fishing grounds. Despite modest production of trimethylamine in Baltic Sea fillets, this cod raw material was less suitable for production of thawed AMP products due to high drip losses during chill storage. (C) 2001 Academic Press.
Production of high quality frozen cod (Gadus morhua) fillets and portions on a freezer trawler

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Bøknæs, N. (Intern), Guldager, H. (Ekstern), Østerberg, C. (Intern), Nielsen, J. (Intern)
Pages: 33-47
Publication date: 2001
Main Research Area: Technical/natural sciences

Publication Information
Journal: Journal of Aquatic Food Product Technology
Volume: 10
ISSN (Print): 1049-8850
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 0.59 SJR 0.268 SNIP 0.582
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.298 SNIP 0.623 CiteScore 0.65
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.275 SNIP 0.632 CiteScore 0.62
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.281 SNIP 0.558 CiteScore 0.59
ISI indexed (2013): ISI indexed yes
QIM er udviklet i Danmark

General information
State: Published
Organisations: Unknown
Authors: Nielsen, J. (Intern)
Pages: 20
Publication date: 2001
Main Research Area: Technical/natural sciences

Publication information
Journal: Fiskeritidende
Volume: 8
ISSN (Print): 0909-7325
Ratings:
ISI indexed (2013): ISI indexed no
ISI indexed (2012): ISI indexed no
ISI indexed (2011): ISI indexed no
Selection and application of quality indicators to describe quality changes in thawed cod

General information
State: Published
Organisations: National Institute of Aquatic Resources, Department of Informatics and Mathematical Modeling, Section for Aquatic Process and Product Technology
Authors: Jensen, K. N. (Intern), Guldager, H. S. (Intern), Jacobsen, G. (Ekstern), Nielsen, J. (Intern)
Publication date: 2001

Host publication information
Title of host publication: Proceedings of Rapid Cooling of Food 28-30 March, Bristol, United Kingdom
Main Research Area: Technical/natural sciences
Conference: Rapid Cooling of Food, Bristol, United Kingdom, 28-30 March, 01/01/2001
Source: orbit
Source-ID: 231624
Publication: Research › Article in proceedings – Annual report year: 2001

Sensorik på internettet

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources
Authors: Nielsen, J. (Intern), Hyldig, G. (Intern)
Pages: 10-11
Publication date: 2001
Main Research Area: Technical/natural sciences

Publication information
Journal: Plus proces
Volume: 15
Issue number: 1
ISSN (Print): 0902-5057
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
BFI (2016): BFI-level 1
BFI (2015): BFI-level 1
BFI (2014): BFI-level 1
BFI (2013): BFI-level 1
ISI indexed (2013): ISI indexed no
BFI (2012): BFI-level 1
ISI indexed (2012): ISI indexed no
BFI (2011): BFI-level 1
ISI indexed (2011): ISI indexed no
BFI (2010): BFI-level 1
BFI (2009): BFI-level 1
BFI (2008): BFI-level 1
Original language: Danish
Source: orbit
Source-ID: 226869
Publication: Research › Journal article – Annual report year: 2001

Sensory quality criteria for five fish species predicted from Near-Infrared (Nir) reflectance measurement

General information
State: Published
Influence of freshness and frozen storage temperature on quality of thawed cod fillets stored in modified atmosphere packaging

General information
Kvalitetskriterier for nye fiskeresourcer (ferske og frosne) rettet mod forbrugernes behov

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology, Section for Aquatic Microbiology and Seafood Hygiene
Authors: Bøknæs, N. (Intern), Østerberg, C. (Intern), Nielsen, J. (Intern), Dalgaard, P. (Intern)
Pages: 244-248
Publication date: 2000
Main Research Area: Technical/natural sciences

Publication information
Journal: Lebensmittel-Wissenschaft und Technologie - Food Science and Technology
Volume: 33
Issue number: 3
ISSN (Print): 0023-6438
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.31
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 3.11
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 3.12
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 3.11
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 3.12
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 3.18
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
BFI (2009): BFI-level 1
BFI (2008): BFI-level 2
Web of Science (2008): Indexed yes
Web of Science (2005): Indexed yes
Web of Science (2004): Indexed yes
Web of Science (2003): Indexed yes
Web of Science (2002): Indexed yes
Web of Science (2001): Indexed yes
Web of Science (2000): Indexed yes
Original language: English
Source: orbit
Source-ID: 225042
Publication: Research - peer-review › Journal article – Annual report year: 2000
Sensory quality criteria for five fish species

Sensory profiling has been used to develop one sensory vocabulary for five fish species: cod (Gadus morhua), saithe (Pollachius virens), rainbow trout (Salmo gairdneri), herring (Clupea harengus) and flounder (Platichthys flesus). A nine-member trained panel assessed 18 samples with variation in species and storage time (1-9 clays) in ice at OC. An initial list containing 46 descriptive words derived from panel, panel leaders and literature was reduced in two steps to 15 words. The vocabulary development was split up in five "qualitative" and seven "quantitative" sessions with relevant references for odor and taste during the qualitative part. The descriptive words should fulfill these criteria: be relevant to the product, discriminate clearly between samples, be nonredundant and have cognitive clarity to the assessors. Criteria fulfilment was reached by evaluating samples spanning a representative variation and by presenting references, panel discussions and interpreting plots from multivariate data analysis. The developed profile can be used as a sensory wheel for these species, and with minor changes it may be adapted to similar species.

General information

State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Warm, K. (Intern), Nielsen, J. (Intern), Hyldig, G. (Intern), Martens, M. (Ekstern)
Pages: 583-601
Publication date: 2000
Main Research Area: Technical/natural sciences

Publication information

Journal: Journal of Food Quality
Volume: 23
Issue number: 6
ISSN (Print): 0146-9428
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.452 SNIP 0.625 CiteScore 1.09
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.506 SNIP 0.712 CiteScore 1.03
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.478 SNIP 0.632 CiteScore 1.03
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.462 SNIP 0.59 CiteScore 0.91
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.533 SNIP 0.646 CiteScore 0.84
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.418 SNIP 0.507 CiteScore 0.67
ISI indexed (2011): ISI indexed yes
**The selection and pretreatment of fish**

**General information**
State: Published  
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources  
Authors: Hedges, N. (Ekstern), Nielsen, J. (Intern)  
Pages: 96-110  
Publication date: 2000

**Host publication information**
Title of host publication: Managing frozen food  
Place of publication: Boca Raton  
Publisher: CRC Press  
Editor: Kennedy, C.  
Main Research Area: Technical/natural sciences  
Source: orbit  
Source-ID: 225717  
Publication: Research - peer-review › Book chapter – Annual report year: 2000

**Rapid PC based sensory method**

**General information**
State: Published  
Organisations: Department of Biotechnology, Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources  
Authors: Jonsdottir, S. (Intern), Hyldig, G. (Intern), Nielsen, J. (Intern), Bleechmore, T. (Intern), Silberg, S. (Intern)  
Pages: 53-56  
Publication date: 1999  
Main Research Area: Technical/natural sciences

**Publication information**
Journal: Infofish International  
Volume: 2  
ISSN (Print): 0127-2012  
Ratings:  
ISI indexed (2013): ISI indexed no  
ISI indexed (2012): ISI indexed no  
ISI indexed (2011): ISI indexed no
Synthesis and degradation of adenosine triphosphate in cod (Gadus morhua) at subzero temperatures

This study has demonstrated that the extraction step is very important when analysing ATP and its degradation products. An important factor is whether the sample is fresh, frozen or thawed when homogenised since thawing of the sample will lead to rapid loss of ATP. During frozen storage it was found that ATP in cod (Gadus morhua) was stable at -40 degrees C in small samples for at least 12 weeks. At -20 degrees C it was found that ATP content increases initially and thereafter falls. It was demonstrated that degradation of ATP in small samples occurs faster at 0 degrees C than at -2 and -5 degrees C. Furthermore, it was found that in whole cod ATP could be synthesised at a significant rate at -7 degrees C.

1999 Society of Chemical Industry.

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology, Section for Aquatic Protein Biochemistry
Authors: Cappeln, G. (Intern), Nielsen, J. (Intern), Jessen, F. (Intern)
Pages: 1099-1104
Publication date: 1999
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of the Science of Food and Agriculture
Volume: 79
Issue number: 8
ISSN (Print): 0022-5142
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.48 SJR 0.87 SNIP 1.222
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.813 SNIP 1.088 CiteScore 2.11
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.819 SNIP 1.153 CiteScore 2.1
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.846 SNIP 1.224 CiteScore 2.22
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.891 SNIP 1.129 CiteScore 1.9
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.757 SNIP 1.003 CiteScore 1.61
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.775 SNIP 0.894
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.86 SNIP 1.054
A rapid sensory method for quality management

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources
Authors: Hyldig, G. (Intern), Nielsen, J. (Intern)
Pages: 297-305
Publication date: 1998

Host publication information
Title of host publication: Methods to Determine the Freshness of Fish in Research and Industry
Place of publication: Paris
Publisher: IIR
Main Research Area: Technical/natural sciences

Bibliographical note
Proceedings of the Final Meeting of the Concerted Action "Evaluation of Fish Freshness" AIR3CT94 2283, Nantes Conference, November 12-14, 1997
Source: orbit
Source-ID: 225838
Publication: Research › Book chapter – Annual report year: 1998

Development of quality index methods for evaluation of frozen cod (Gadus morhua) and cod filets

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Warm, K. (Intern), Bøknæs, N. (Intern), Nielsen, J. (Intern)
Pages: 45-50
Publication date: 1998
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of Aquatic Food Product Technology
Volume: 7
ISSN (Print): 1049-8850
Factors affecting the quality of frozen meat and fish
Prediction of chemical, physical and sensory data from process parameters for frozen cod using multivariate analysis

Physical, chemical and sensory quality parameters were determined for 115 cod (Gadus morhua) samples stored under varying frozen storage conditions. Five different process parameters (period of frozen storage, frozen storage temperature, place of catch, season for catching and state of rigor) were varied systematically at two levels. The data obtained were evaluated using the multivariate methods, principal component analysis (PCA) and partial least squares (PLS) regression. The PCA models were used to identify which process parameters were actually most important for the quality of the frozen cod. PLS models that were able to predict the physical, chemical and sensory quality parameters from the process parameters of the frozen raw material were generated. The prediction abilities of the PLS models were good enough to give reasonable results even when the process parameters were characterised by ones and zeroes only. These results illustrate the application of multivariate analysis as an effective strategy for improving the quality of frozen fish products. (C) 1998 Society of Chemical Industry
Thawed cod fillets spoil less rapidly than unfrozen fillets when stored under modified atmosphere at 2°C

The effect of two months of frozen storage at -20 degrees C on the spoilage characteristics and shelf life of thawed and modified atmosphere packed (MAP) cod fillets stored at 2 degrees C was studied. Thawed MAP cod fillets were compared with fresh cod fillets stored in CO2-containing modified atmospheres with and without added oxygen. The shelf life of 11 to 12 days in the fresh MAP cod was extended to more than 20 days in the thawed MAP cod at 2 degrees C. This shelf life extension was most likely due to the inactivation of the spoilage bacterium Photobacterium phosphoreum during frozen storage as reflected both in chemical analyses and sensory evaluation. In contrast to fresh MAP cod fillets no significant production of trimethylamine occurred and almost no amine odor and taste were detected during 20 days of chill storage of thawed MAP cod fillets. The use of frozen fillets as raw material not only provides a more stable product in MAP but also allows much greater flexibility for production and distribution. However, a slightly increased concentration of dimethylamine, a larger drip loss, and detection of weak frozen storage flavor were observed in the thawed MAP cod fillets.
Aqueous solutions of proline and NaCl studied by differential scanning calorimetry at subzero temperatures

The hydration properties of proline are studied by differential scanning calorimetry (DSC) in aqueous solutions during freezing to -60 degrees C and subsequent heating to +20 degrees C. The concentration of proline in the freeze concentrated solution was estimated to approximately 50 wt% (w/w) indicating a high water solubility of proline at subzero temperatures. No glass transition was observed within the concentration range 0.9-40.1 wt% (w/w), neither at a low scanning rate of 2.5 degrees C/min nor at a higher scanning rate of 10 degrees C/min. Eutectic crystallization of proline was not observed during freezing or melting which shows that proline has the ability to stay in solution at subzero temperatures. Samples containing proline-NaCl-water were also investigated by DSC and it was shown that the solubility of proline is maintained in aqueous salt solutions at temperatures as low as -60 degrees C. From DSC measurements it was found that the eutectic crystallization of NaCl is prevented by the presence of proline, even when NaCl (initially) is present in molar excess ([NaCl]/[proline] = 2.6). The possible association of these findings with the occurrence of proline accumulation in some plants and insects living under water stress conditions is discussed. (C) 1997 Elsevier Science B.V.
Cryoprotective properties of proline in cod muscle studied by differential scanning calorimetry

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Rasmussen, P. H. (Intern), Jørgensen, B. (Intern), Nielsen, J. (Intern)
Pages: 293-300
Publication date: 1997
Main Research Area: Technical/natural sciences

Publication information
Journal: CryoLetters
Volume: 18
ISSN (Print): 0143-2044
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.221 SNIP 0.657 CiteScore 0.71
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.277 SNIP 1.231 CiteScore 0.82
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.467 SNIP 0.916 CiteScore 1.16
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.305 SNIP 0.637 CiteScore 0.98
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Methods to evaluate fish freshness in research and industry

General information
State: Published
Organisations: Section for Aquatic Microbiology and Seafood Hygiene, National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Olafsdottir, G. (Ekstern), Martinsdóttir, E. (Ekstern), Oehlenschläger, J. (Ekstern), Dalgaard, P. (Intern), Jensen, B. (Intern), Undeland, I. (Ekstern), Mackie, I. (Ekstern), Henehan, G. (Ekstern), Nielsen, J. (Intern), Nilsen, H. (Ekstern)
Pages: 258-265
Publication date: 1997
Main Research Area: Technical/natural sciences

Publication information
Journal: Trends in Food Science & Technology
Volume: 8
Issue number: 8
ISSN (Print): 0924-2244
Ratings:
BFI (2018): BFI-level 2
BFI (2017): BFI-level 2
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 2
Scopus rating (2016): SJR 2.279 SNIP 2.694 CiteScore 6
BFI (2015): BFI-level 2
Scopus rating (2015): SJR 2.218 SNIP 2.6 CiteScore 5.51
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): SJR 2.183 SNIP 2.789 CiteScore 5.17
BFI (2013): BFI-level 2
Scopus rating (2013): SJR 2.195 SNIP 2.679 CiteScore 4.83
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
New developments in sensory analysis for fish and fishery products

General information
State: Published
Organisations: Section for Aquatic Process and Product Technology, National Institute of Aquatic Resources
Authors: Nielsen, J. (Intern), Jessen, K. (Ekstern)
Pages: 537-547
Publication date: 1997

Host publication information
Place of publication: Amsterdam
Publisher: Elsevier
Editors: Luten, J., Børresen, T., Oehlenschläger, J.
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 226866
Publication: Research - peer-review › Book chapter – Annual report year: 1997
Quality index method of frozen cod

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Aquatic Process and Product Technology
Authors: Warm, K. (Ekstern), Bøknæs, N. (Intern), Nielsen, J. (Intern)
Pages: 341
Publication date: 1996
Main Research Area: Technical/natural sciences

Publication information
Journal: Food Quality and Preference
Volume: 7
ISSN (Print): 0950-3293
Ratings:
BFI (2018): BFI-level 2
BFI (2017): BFI-level 2
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 4.21 SJR 1.146 SNIP 1.703
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): SJR 1.082 SNIP 1.85 CiteScore 3.92
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): SJR 1.007 SNIP 1.701 CiteScore 3.18
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 1.209 SNIP 1.717 CiteScore 3.3
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.958 SNIP 1.742 CiteScore 2.6
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 1.051 SNIP 1.367 CiteScore 1.97
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.014 SNIP 1.818
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.929 SNIP 1.531
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 0.865 SNIP 1.548
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 1.024 SNIP 1.893
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.928 SNIP 1.208
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 0.814 SNIP 1.613
Scopus rating (2004): SJR 0.872 SNIP 1.449
Scopus rating (2003): SJR 0.988 SNIP 1.345
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 0.563 SNIP 1.209
Projects:

SensNet
National Food Institute
Research Group for Bioactives – Analysis and Application
Period: 01/01/2009 → 30/06/2015
Number of participants: 2
Acronym: SensNet
Project participant:
Hyldig, Grethe (Intern)
Nielsen, Jette (Intern)

Financing sources
Source: Other public support (public)
Name of research programme: LMC's strategiske pulje
Amount: 400,000.00 Danish Kroner
Project

Forbruger orienteret sensorisk kvalitets model for fisk og fiskeprodukter
National Food Institute
Period: 01/11/2004 → 23/06/2010
Number of participants: 7
Phd Student:
Green-Petersen, Ditte (Intern)
Supervisor:
Jørgensen, Bo Munk (Intern)
Nielsen, Jette (Intern)
Main Supervisor:
Hyldig, Grethe (Intern)
Examiner:
Nielsen, Henrik Hauch (Intern)
Brunsø, Karen (Ekstern)
Wendin, Karin (Ekstern)

Financing sources
Source: Internal funding (public)
Name of research programme: Ansat eksternt
Project: PhD

Måltidselementer - Optimering af produktion af distribuerede måltider
National Food Institute
Period: 01/08/2003 → 30/04/2008
Number of participants: 6
Phd Student:
Engelund, Eva Høy (Intern)
Supervisor:
Betydning af Lipidsammensætning og Bindevævets Stabilitet for Kvalitet af Røget Laks

Department of Systems Biology
Period: 01/06/2003 → 03/09/2007
Number of participants: 7
Phd Student:
Løje, Hanne (Intern)
Supervisor:
Hyldig, Grethe (Intern)
Nielsen, Henrik Hauch (Intern)
Main Supervisor:
Nielsen, Jette (Intern)
Examiner:
Søndergaard, Ib (Intern)
ofstad, Ragni (Ekstern)
Skåra, Torstein (Ekstern)

Financing sources
Source: Internal funding (public)
Name of research programme: Offentlig finansiering
Project: PhD

Sild- denlevende ressource- Det gode produkt

Department of Systems Biology
Period: 01/04/2001 → 27/07/2004
Number of participants: 7
Phd Student:
Nielsen, Durita (Intern)
Supervisor:
Hyldig, Grethe (Intern)
Nielsen, Henrik Hauch (Intern)
Main Supervisor:
Nielsen, Jette (Intern)
Examiner:
Jørgensen, Bo Munk (Intern)
Martens, Magni (Ekstern)
Undeland, Ingrid (Ekstern)

Financing sources
Source: Internal funding (public)
Name of research programme: Kandidatstipendium ansat ekste
Project: PhD

Kvalitet af muskelbaserede fiskeprodukter

Department of Systems Biology
Kvalitetsbestemmelse af frosset optøet gaspakket torsk. Modellering med teknologiske parametre

Department of Systems Biology
Period: 01/10/1997 → …
Number of participants: 6
Phd Student:
Bøknæs, Niels (Intern)
Supervisor:
Skov, Lisbeth Due (Ekstern)
Main Supervisor:
Nielsen, Jette (Intern)
Examiner:
Høegh, Lars (Ekstern)
Jørgensen, Bo Munk (Intern)
Sørensen, Nils K. (Ekstern)

Financing sources
Source: Internal funding (public)
Name of research programme: Erhvervsforskerordningen
Project: PhD

Quality indicators for frozen fish
An important factor for efficient utilisation of the resources of fish is quality assurance in the chain from catch to consumer. Freezing is an effective method for preserving fat and lean fish. In order to reduce the quality loss during processing, storing and distribution it is necessary to obtain better knowledge of the biochemical shelf life indicators of the different species. It is important to create a system of traceability of the fish through the chain for the benefit of the consumer. On the background of the obtained knowledge in the project the objective is to construct a model for labelling of quality, prediction of shelf life and utilisation and to obtain a better freezing stability. The aim is to give guidelines for the optimum handling of fish prior to freezing, the optimum freezing-, storage- and thawing conditions and to collect data necessary for prediction of a production of thawed fish packed in MAP based on raw material frozen-at-sea. The effect of season, catch handling, cold/chilled storage period and temperature is examined.

National Institute of Aquatic Resources
Hoejmarklaboratory
Period: 01/01/1997 → 01/03/2002
Number of participants: 6
Project participant:
Jensen, Helle Skov (Intern)
Jørgensen, Bo Munk (Intern)
Jessen, Flemming (Intern)
Jensen, Kristina Nedenskov (Intern)
Godiksen, Helene (Intern)
Project Manager, organisational:
Nielsen, Jette (Intern)

**Financing sources**
Source: Unknown
Name of research programme: *Ukendt*
Amount: 9,994,630.00 Danish Kroner
Project