

codex alimentarius commission



FOOD AND AGRICULTURE
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Agenda Item 10

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

Twenty-fifth Session
Ålesund, Norway, 3 - 7 June 2002

PROPOSED DRAFT STANDARD FOR SCALLOPS GOVERNMENT COMMENTS AT STEP 3 (Canada, Cuba, France, United States)

CANADA

General Comments:

1. Scallops and the Proposed Draft Code of Practice for Fish and Fishery Products

At the Twentieth Session of the Codex Committee of Fish and Fishery Products (1992), while discussing the "Inclusion of Fresh Fillets in the Codex Standard for Quick Frozen (QF) Fish Fillets," the Committee agreed that fresh fillets should not be included into the draft standard for QF fish fillets (Alinorm 93/18, para 26). The Committee noted that fresh product, with a short shelf life, would be difficult to accommodate in the standard for QF fillets and also noted that the usual Codex procedure for dealing with such a product was through the development of appropriate codes of practice.

Canada is of the view that the Codex code of practice for fish and fishery products should be used to provide guidance for facilitating compliance with the hygienic, essential composition and quality and labelling provisions of the "Proposed Draft Standard for Scallops." This approach is particularly important for addressing the moisture issue in both fresh and frozen scallops. Therefore, Canada recommends that a new section should be elaborated for the production of scallops in the "Proposed Draft Code of Practice for Fish and Fishery Products." This proposal is consistent with the 1992 decision reached by the CCFPP.

2. Scallops With Sodium Tripolyphosphate and Excessive Water

Canada recognizes that allowing and establishing a level for sodium tripolyphosphate as a food additive in scallops is an important non safety issue. When scallops are soaked in fresh water and sodium tripolyphosphate for an extended period of time, the scallop meat has the tendency to take up and retain water. Marketing of these scallops becomes a fraudulent practice when the consumers are unaware of the increased moisture content. In addition, there is a general reduction in overall product flavour and palatability. For these reasons, Canada is fundamentally concerned with excessive water and the use of sodium tripolyphosphate that can negatively affect the composition and sensory characteristics of scallops. Canada is of the opinion that scallops should not be adulterated with added water and little or no sodium tripolyphosphate should be added to this product. However, Canada is not opposed to obligatory labelling requirements for "added water" where the maximum water content has been exceeded and for the use of sodium tripolyphosphate, should this food additive be permitted in scallops. Proper labelling would allow consumers to make informed choices when purchasing scallops.

3. Scallop Meat with Viscera and/or Roe Attached

Canada would welcome a discussion on the purpose(s) of the scallop standard and the bivalve molluscs standard. We are of the opinion that the primary concern for the consumption of scallop meat with viscera and/or roe attached are health and safety, related to marine biotoxin. The “*Proposed Draft Standard for Live, Quick Frozen and Canned Bivalve Molluscs*” is currently incorporating marine biotoxin standards. Canada believes that there are sufficient similarities between scallop meat with viscera and/or roe attached and other bivalve molluscs with respect to marine biotoxin that inclusion of live scallops and scallop meat with viscera and/or roe attached in the “*Proposed Draft Standard for Live, Quick Frozen and Canned Bivalve Molluscs*” would be the best fit.

Specific Comments:

4. Section 1 - Scope:

Canada is of the view that a protein-bound scallop is a product of further processing and that this specialty product differs from the common scallop meat as defined in the scope (i.e. for direct consumption or further processing). Canada suggests that the proposed draft standard does not cover scallop meat bound by fibrinogen or other binders.

5. Section 3.3.2 - Final Product (Moisture Content)

For initial discussion purposes, the proposed draft standard included a maximum moisture content of 81.0% (currently placed in square brackets) based on a Canadian study that was carried out in 1993 - 1994 that covered a one year period which examined the seasonal variability of the moisture content in shucked meats of sea scallops (*Placopecten magellanicus*) harvested by Canadian fishing vessels. Commercial handling practices (i.e. live scallops were immediately shucked, the meats were washed in sea water and packed in cotton bags that holds approximately 40 pounds) and an ice storage method was employed. The on-board storage time ranged from zero days (live control samples) to 10 days.

An analysis of the results showed that water absorption increased with the number of days on ice. A comparison of the seasonality of the results showed that scallops harvested in the winter have highest moisture values with the summer values being the lowest. In this study, the moisture content of all samples ranged from 74.19% to 80.94% with a mean of 78.70%. The 95% upper tail tolerance limit for moisture content was found to be 80.5%. Analysis of the cumulative percentage frequency distribution confirmed that none of the moisture content values were greater than 81.0%. This meant that, in the Canadian study that took into account: the seasonality, length of fishing voyages (days on ice) and handling procedures, an upper limit moisture content of 81.0% can be met in all circumstances. Using current commercial harvesting practices for sea scallops, Canada therefore considers moisture content of less than or equal to 81.0%, to be an attribute of scallop meat.

Canada recognizes that additional work may be required particularly in the case where natural moisture content may vary among other scallop species. Other factors (shelf life and sensory characteristics) may also need to be considered in the establishment of a maximum moisture content level. Canada would support a maximum moisture content limit for scallop meat that was handled or produced following good manufacturing practices and that is scientifically validated and technically justified.

CUBA (ENGLISH VERSION)

We have no comment on this product because we do not produce anything similar, although we are of the opinion that if scallop is a molluscan shellfish it should be considered as such in a general standard for molluscan shellfish.

CUBA (VERSIÓN ESPAÑOLA)

No tenemos comentarios sobre este producto ya que no se elabora nada parecido al mismo en el país, aunque somos de la opinión de que ya que el peine es un molusco el mismo sea tratado como tal en un proyecto de norma general para los moluscos.

FRANCE (ENGLISH VERSION)

Paragraph 3.3.2

Moisture content is not the adequate parameter to define a threshold above which scallops should not be marketed because they have been soaked in water.

Moisture content and protein content in scallops vary according to the species, environment and the period of life.

Consequently, the moisture content of scallops may be naturally high but the protein content may also be high. In this case, the moisture content may be higher than the allowed level without any water addition.

Conversely, scallops may have a low moisture content and also a low protein content. In this case, a large quantity of water may have been added, but the moisture content will not be superior to the allowed level.

This is why France, in agreement with the United Kingdom and Japan, carried out comparative studies in 1981 and 1991 to investigate the analytical characteristics that would allow to demonstrate that scallops do not contain added water. Experiences were carried out for the species *Pecten maximum*, *Chlamys islandica*, *Patinopecten yessoensis*. They allowed to establish that the ratio between water content (H) and protein percentage (P) : H/P was inferior to 5 when no water was added.

In 1991, analyses on scallops flesh lots harvested in the United Kingdom were carried out simultaneously and with the same methods in France and the United Kingdom. These experiments demonstrated the influence that washing and drying methods could have on the water/protein ratio, but they also demonstrated that this ratio was never superior to 5, irrespective of the treatment used.

For fresh shucked scallops, the mean ratio is as follows:

No washing: 4.15

Soaking 5 min, drying with paper : 4.56

Soaking 5 mn, draining 5 mn : 4.66

Soaking 10 mn drying with paper : 4.68

For shucked scallops after 18 h freezing, the mean ration is as follows :

No washing : 4.25

Soaking 5 mn, drying with paper : 4.44

Soaking 5 mn, draining 5 mn : 4.67

Soaking 10 mn, drying with paper : 4.65

The results of the British studies clearly demonstrate that the moisture/protein ratio increases with the washing time.

In addition the moisture content proposed in the Proposed Draft Standard is very high because the results recorded in French laboratories show that the mean moisture content is 77.3 and only 6 samples out of 94 are above 81% moisture. It would be especially useful to rely on an internationally recognized threshold in order to improve fair trade practices on the market.

As scallops absorb water very easily , it is necessary to find a threshold that would allow to distinguish the products with added water. The ratio H/P appears to be the best index.

Finally, we are totally opposed to the use of polyphosphates that would still increase water absorption in a product for which it is not necessary.

Paragraph 5.2

It is necessary to take into account the risk of contamination of adductor muscle with marine biotoxins. Recent studies carried out by the European Community Reference Laboratory on marine biotoxins have shown that ASP toxin may be present in scallop adductor muscle (see European Commission Decision 2002/226 published on 16 March 2002).

Paragraphe 6.1.1

Following the proposals of the French delegation on labelling, the common name of scallops should be completed with the scientific name and the origin.

FRANCE (FRENCH VERSION)

Paragraphe 3.3.2

La teneur en humidité n'est pas la mesure adéquate pour définir un seuil au-delà duquel les pectinidés ne seraient plus commercialisables car « trempés ».

En effet, les teneurs en humidité ainsi qu'en protéines des pectinidés varient selon leur espèce, leur environnement et la période de leur vie.

En conséquence, un pectinidé peut naturellement avoir un taux d'humidité élevé mais un taux de protéine élevé également. Dans ce cas, le pectinidé pourra dépasser le seuil d'humidité admis sans pour autant que de l'eau ait été ajoutée.

Inversement, un pectinidé peut avoir un faible taux d'humidité mais également un faible taux de protéine. Dans ce cas, il aura pu être ajoutée une grande quantité d'eau, sans pour autant que le taux d'humidité dépasse le seuil admis.

C'est pourquoi la France, en accord avec le Royaume-Uni et le Japon, lors d'études comparées au cours de l'année 1988 et 1991, a recherché des caractéristiques analytiques permettant de démontrer que les pectinidés ne contenaient pas d'eau ajoutée. Des expériences ont été menées pour les espèces *Pecten maximus*, *Chlamys islandica*, *Patinopecten yessoensis*. Elles ont permis d'établir que le rapport du pourcentage d'humidité (H) au pourcentage de protéines (P) : H/P était inférieur à 5 en l'absence d'eau ajoutée.

En 1991, des analyses de lots de chair de pectinidés, récoltés au Royaume-Uni, ont eu lieu simultanément et selon les mêmes méthodes en France et au Royaume-Uni. Ces expérimentations ont mis en évidence l'influence que pouvaient avoir les méthodes de lavage et de séchage sur le ratio eau/protéines, mais elles ont montré aussi que ce ratio ne dépassait jamais 5, quel que soit le traitement utilisé.

Pour des pectinidés frais décoquillés, les moyennes sont les suivantes :

Pas de lavage : 4,15

Trempage 5 mn, séchage papier : 4,56

Trempage 5 mn, égouttage 5 mn : 4,66

Trempage 10 mn séchage papier : 4,68

Pour des pectinidés décoquillés après 18 h de congélation, les moyennes sont les suivantes :

Pas de lavage : 4,25

Trempage 5 mn, séchage papier : 4,44

Trempage 5 mn, égouttage 5 mn : 4,67

Trempage 10 mn séchage papier : 4,65

Les résultats des études britanniques font apparaître clairement que le ratio eau/protéines est d'autant plus élevé que le temps de lavage augmente.

On remarque par ailleurs que le taux d'humidité proposé dans le projet de norme est très élevé car pour ce qui est des résultats enregistrés par les laboratoires français, le taux d'humidité est en moyenne de 77,3 et seuls 6 échantillons sur 94 dépassent 81 % d'humidité. Il serait particulièrement utile pour améliorer la loyauté du marché de pouvoir s'appuyer sur un seuil internationalement reconnu.

Les pectinidés retenant l'eau très facilement, il est nécessaire de trouver un seuil qui permette de distinguer les produits pour lesquels de l'eau a été ajoutée. Le rapport H/P paraît le meilleur indice.

Enfin nous sommes tout à fait opposés à l'autorisation d'utilisation de polyphosphates qui augmentent encore la rétention d'eau d'un produit qui n'en a absolument pas besoin.

Paragraphe 5.2

Il est nécessaire de tenir compte du risque de contamination des muscles adducteurs des pectinidés par les biotoxines marines. De récentes études menées par le laboratoire de référence de la Communauté européenne sur les biotoxines marines ont en effet montré la présence possible de toxine ASP dans les muscles adducteurs des pectinidés (cf. décision de la Commission européenne 2002/226/CE publiée le 16 mars 2002).

Paragraphe 6.1.1

Conformément aux propositions de la délégation française sur l'étiquetage, il convient de compléter la dénomination usuelle du pectinidé par le nom scientifique et l'origine.

UNITED STATES

Comments

Section 3.2, Glazing, Last sentence, delete "same microbiological standards as potable water" and replace it with "Clean Water requirements as defined in the Code of Practice for Fish and Fishery Products."

Reason: Using Clean Water as defined by the Codex is sufficient for use for glazing of the scallops.

Section 3.3.2, First Sentence, delete "81" and substitute "82."

Reason: The proposed level of 82 results from the findings of a study on moisture content of sea scallops at various harvest and post harvest stages.

Moisture content of scallop meats at harvest (immediately after shucking) ranges from 73.7 to 78.9 percent. A total of 136 samples were analyzed. Each sample was a composite of seven scallop meats. At off-loading from the harvest vessel, the values ranged from 74.2 percent to 82.5 percent. A total of 91 composite samples were analyzed. The broader range in moistures at off-loading, compared to the moisture values at harvest, was attributed to the added variables that influence moisture uptake during on-board processing and storage, such as whether ice-seawater slush's were used on deck, and the length of time the scallop meats were stored in the ice hold.

The results at off-loading were statistically analyzed to determine what the upper limit for moisture content would have to be in order for all the samples collected in this study to be in compliance with a hypothetical upper limit for scallop meat moisture. The study report states that to achieve a 95 percent probability of compliance, the upper limit would have to be 81.6 percent. For the probability of compliance to be greater than 95 percent, the upper limit for moisture content would have to be 82.0 percent (for more details see Appendix I.)

Section 4, Food Additives, delete the text in its entirety and substitute the following:

"Section 4, Food Additives

Sequestrent	Limitation
Phosphate Compounds	GMP "

Reason: Phosphate compounds are widely used during processing of scallops worldwide. All types of scallops are subject to drip loss after shucking. These compound solutions were found to aid the scallops in retaining their natural moisture. Additionally, Phosphates also help to maintain the original white or creamy color of the scallop meat, which tends to darken over time.