

Codex Committee on Food Hygiene (41st Session)

San Diego (16-20 November 2009)

European Community comments on the

Proposed Draft Code of Practice for Control of Viruses in Food

(Agenda item 8, CX/FH 09/41/8)

*Mixed competence
European Community vote*

General Comments

The European Community and its Member States (ECMS) would like to thank the Netherlands for leading the work in developing the draft code of practice for control of viruses in food.

The ECMS support the comprehensive approach taken in the draft document and are willing to contribute to further development of the text. Certain sections, in particular the Annexes, are still rather general and would benefit from more specific information based on up to date practical analysis of the critical points pertinent to each food supply chain (e.g. there should be more clarity as regards the different sources of water that can be used at different steps of the process and more emphasis could be made on the hygiene of food handlers).

The ECMS would like to draw attention to a recently launched project called "Integrated monitoring and control of food borne viruses in European food supply chains" (VITAL)¹. A major aim of the project is to produce a code of practice for control of virus contamination of food supply chains. The output of the project might be useful in the further development of the Codex guidelines.

Taking into account the numerous and comprehensive comments made by several delegations (CX/FH 09/41/8-Add.1), it would seem appropriate to return the draft Codex Code of Practice for control of viruses in food back to step 2 for further elaboration.

¹ For further information: <http://www.eurovital.org/>

Specific Comments

2.3 DEFINITIONS

Include a reference to the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RP 53-2003).

Delete the definition for "food worker" and replace "food worker" by "food handler" throughout the text as there is an existing definition for a "food handler" in the Recommended International Code of Practice General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 4-2003): "any person who directly handles packaged or unpackaged food, food equipment and utensils, or food contact surfaces and is therefore expected to comply with food hygiene requirements"

Delete the definition for shellfish as it is already defined in the Code of Practice for fish and fishery products (CAC/RP 52-2003): "means those species of aquatic molluscs and crustaceans that are commonly used for food".

Delete the definition for "fresh produce".

3.1 ENVIRONMENTAL HYGIENE

Define high quality water, does this refer to "clean water" as defined in the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RP 53-2003) and the Code of Practice for fish and fishery products (CAC/RCP 52-2003)? Bivalve molluscs are grown in seawater, so the usage of potable water is not feasible.

3.4 CLEANING, MAINTENANCE AND PERSONNEL HYGIENE AT PRIMARY PRODUCTION

There is nothing on cleaning, some guidance could be given at least on cleaning the toilets and changing facilities, or a reference could be made to point 6.1.

- In the second last sentence, replace "complaints of" with "diagnosed". The sentence would read: "In case of ~~complaints of~~ **diagnosed** acute hepatitis, the whole staff should seek medical advice."

5.1.2 Implement effective control procedures at those steps

Align with 3.4, only part of 3.4 is repeated which is confusing, e.g. in case of acute hepatitis, the whole staff should seek medical advice.

7th indent: Everybody returning should apply even more attention to strict hand hygiene, not only staff that had hepatitis, but also staff that had gastroenteritis.

9th indent: A reference to 6.1.2 could be made where an effective method is described as there are only few effective disinfection agents.

10th indent (and point 5.3) It could be clarified what is meant with controlled health. Does it refer to a medical examination or something similar?

Add a new indent which would read: "Avoid presence of non-authorized persons during food handling".

5.1.3 Monitor control procedures to measure their continuing effectiveness

It is not clear what is meant "Not applicable yet". For example, the following measures could be incorporated here:

- "- Check that staff returning after being healed from hepatitis have had a medical examination and that other staff members have not been infected.
- Integrate virus measures into HACCP"

5.1.4 Review control procedures periodically, and when ever the operations change

It is not clear what is meant "Not applicable yet". For example, the following measure could be incorporated here:

- "- If an outbreak has been traced back to an establishment, the necessary steps should be taken to find the source, to eliminate the virus and to avoid future outbreaks"

5.2 KEY ASPECTS OF HYGIENE CONTROL SYSTEMS

The effectiveness of different control systems, such as heat treatment, could be further elaborated as follows²:

"Depending on the food matrix, viruses can decline during chilling. Yet, persistence of a considerable number of viruses is mostly ascertained during the shelf life period of chilled foods. Viruses can also survive in acidified, dry or MAP conditions. The long term survival of viruses in combination with the low infectious dose indicates that food preservation methods establishing microbial growth inhibition will not be sufficient to prevent foodborne viral infections.

Preservation methods establishing microbial inactivation such as heating, high hydrostatic pressure processing and irradiation are therefore considered as intervention strategies to reduce the level of viruses. The heat inactivation data obtained in several studies suggested that at least conventional pasteurization (e.g. 63 °C–30 min, 70 °C–2 min) is needed (to achieve more than a 3 log reduction). Additionally, the required time–temperature combination depends upon the food matrix.

High hydrostatic pressure might be able to reduce the level of HAV and NoV (by more than 3 log), whereas some strains (of Enterovirus) are shown to be very resistant to HPP.

Investigation of UV and gamma irradiation to eliminate viruses is limited. More data is required to determine the influence of food matrices. Additionally, the possibility of foodborne viruses to acquire resistance (or other mutations) needs to be examined.

Decontamination procedures on fresh produce were shown to have a marginal effect (of approximately 1 to 2 log reductions). The efficacy of sanitizers varied between viral strains."

5.4 PACKAGING

² Baert, L.; Debevere, J. & Uyttendaele, M. (2009). The efficacy of preservation methods to inactivate foodborne viruses. *Int. J. Food Microbiol.* 131 (2-3), p. 83-94.

Modified atmosphere packaged (MAP) conditions do not appear to be a suitable strategy to reduce the number of viruses present on food³.

5.5.1 In contact with food

In practice, prewashed and prepacked raw fruits and vegetables are not always washed before addition to e.g. sandwiches.

6.1.2 Cleaning procedures and methods

2nd paragraph: The text provides that "food handling in the same area(s) should be stopped" in case of spillage or contamination with faeces or vomit. Factory rooms can be very large and this could mean stopping the whole production which is not realistic and necessary. Therefore, the sentence should be reworded as follows:

"...food handling in the ~~same~~ **surrounding** area should be stopped."

3rd paragraph: More examples of effective disinfecting methods could be mentioned here.

6.2 CLEANING PROGRAMMES

There are no cleaning programmes described in this paragraph. Therefore, reword the first sentence as follows:

~~"For normal cleaning programmes –~~ Refer to the **Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969)**."

7.2 ILLNESS AND INJURIES

In the second last sentence, replace "complaints of" with "diagnosed". The sentence would read: "In case of ~~complaints of~~ **diagnosed** acute hepatitis, the whole staff should seek medical advice."

7.5 GLOVES

This is a new heading which does not appear in the General Principles of Food Hygiene (CAC/RCP 1-1969). It would be better to put it in the text in 7.3.

SECTION IX – PRODUCT INFORMATION AND CONSUMER AWARENESS

The text gives the impression that products should be labeled with a text "might contain viruses". Therefore, it should be reworded as follows:

"Consumers should be made aware of the risks **associated to the consumption of ~~infection when consuming~~ raw or lightly cooked ready to eat food ~~that may be~~ contaminated with viruses during production, via labelling of the products (Annex II). **Each country has specific consumption habits, therefore communication programmes pertaining to viruses are most effective when established by individual governments.**"**

³ Bidawid, S.; Farber, J.M.; Sattar, S.A. (2001). Survival of hepatitis A virus on modified atmosphere – packaged (MAP) lettuce. Food Microbiology, 18, p. 95-102

10.2 TRAINING PROGRAMMES

Insert in the 2nd sentence the following:

"...knowledge on sources and routes of transmission of viruses and their incubation periods of viruses, and..."

ANNEX I

Only the introduction has new information, the rest of Annex I is repetition. Therefore, Annex I could be deleted and the text in the introduction be inserted in the relevant sections in the main text.

ANNEX II

INTRODUCTION

There seems to be inconsistency in how long viruses can persist in live bivalve mollusks. This might be due to factors such as water temperature, species, water quality, water flow, etc. which could be clarified in the text.

SECTION III - PRIMARY PRODUCTION

16th line: Replacing "is" by "may be". The sentence would read:

"When there is a likelihood or evidence of virus contamination through epidemiological information or environmental events or direct detection through virological analysis, long term relaying for at least two months is may be recommended or destination for exclusively heat treatment before consumption."

Rationale: Duration of relaying must be determined according to several factors

3.1 ENVIRONMENTAL HYGIENE

Define high water quality (in the main text).

5.1.2 Implement effective control procedures at those steps

Add a new indent regarding risk periods to be identified according the records of contamination history of molluscs harvesting areas, between 1st and 2nd indent:

"Records regarding the history of contamination of molluscs harvesting areas by VHA and NoV should be reviewed in order to determine whether risk periods can be identified for each area; during such periods, the monitoring of areas should be reinforced."

Implementation of the recommendation in the 2nd indent (Sewage treatments should be improved to obtain maximal reduction of viral loads of the effluents) could be the competence of and/or include other authorities and will be difficult to achieve especially in a short term. There is also lack of knowledge on sewage treatment plan efficiency on viruses.

Add the following in the 3rd indent:

"After heavy rainfall, **during risk periods and/or after overflow from sewage platforms**, harvesting of bivalve molluscs (especially oysters) should be halted for a period,..."

It remains unclear in the 3rd indent for which microbial agents the water quality should be checked, possibly *E. coli*? Testing of water by RT-PCR is not very efficient and that testing should be performed on the molluscs.

5.2.1 Specific process steps

Reword the paragraph as follows:

"The country's competent authority should approve commercial heat treatment processes, e.g. in **the European Community heat treatment parameters are specified in order to eliminate pathogenic micro-organisms from shellfish originating from certain areas ("B" or "C" areas)**⁴, ~~the UK heat cook parameters of raising the internal temperature of bivalve molluscs meats to 90 °C for 1.5 min⁴~~

Footnote 4 on page 25 would read:

Regulation (EC) No 853/2004 of the European Parliament and of the Council of 29 April 2004 laying down specific hygiene rules for food of animal origin, chapter II A point 5. ~~Council Decision of 11th December 1992 approving certain heat treatments to inhibit the development of pathogenic micro-organisms in bivalve molluscs and marine gastropods (93/25/EEC). Off. J. Eur. Communities. 16, 22-23~~

9.3 LABELLING

Add the following at the end of the last sentence:

"A recommended end-point treatment of the bivalves prior to consumption should therefore be on the package label **for shellfish eaten other than alive.**"

Rationale: Clarify that labelling recommending end-point treatment of bivalve molluscs is not applicable for live shellfish intended to be consumed alive.

ANNEX III

Reword the title as follows:

"CONTROL OF HEPATITIS A VIRUS (HAV) AND NOROVIRUS (NoV) IN FRESH ~~PRODUCE~~ FRUITS AND VEGETABLES, INCLUDING LEAFY PRODUCTS"

5.1.2 Implement effective control procedures at those steps

Implementation of the recommendation in the 2nd indent (Sewage treatments should be improved to obtain maximal reduction of viral loads of the effluents) could be the competence of and/or include other authorities and will be difficult to achieve especially in a short term. There is also lack of knowledge on sewage treatment plan efficiency on viruses.

5.2.2.1 Post harvest water use

Add at the end of the paragraph the following sentences:

“If applicable, antimicrobial agents should be approved by the competent authorities. Viruses might also have the potential to internalise in fresh produce and consequently reduce the effect of decontamination.⁴ “

Editorial comments

- (1) Introduction: 2nd sentence: ... currently used control measures ~~typically~~ have ...
- (2) Section I – Objective - Rewrite first sentence: The primary purpose of these guidelines is to minimize the risk of illness arising from the presence of enteric viruses **in foods, and more specifically from norovirus (NoV) and hepatitis A virus (HAV).**
- (3) 2.2 First sentence – ~~This~~ **These** G guidelines follow.....
- (4) 2.3 Hepatitis A virus: not in bold and italic.
- (5) 2.3 NoV-norovirus, ~~formally~~ **formerly** known as Norwalk-like virus.
- (6) 3.4. Rewrite / split first sentence (long).
- (7) Replace “returning of persons” by “return of staff”.
- (8) 5.1.1 First bullet - delete being.
- (9) 5.1.2 2nd bullet - Personal hygiene of food handlers is critical.
- (10) 5.1.3 3rd bullet... from food handling or ~~to be~~ **being** present.
- (11) 5.6 During settling in into the new job ~~of each new employee~~...
- (12) 6.1.2 Para 3 - Delete e.g., it already says “one of”, so e.g. isn’t necessary.
- (13) 6.2 The reference has been put in differently than before e.g. 6.3.
- (14) 7.1 Para 2... should be excluded **from handling** food or **being** present in the premises.
- (15) 7.3... after returning from the toilet or being ... or **vomiting**
- (16) 7.5 In addition, money , tickets, etc. should not be handled at the same time as food ...
- (17) 10.1 It is also the ... after returning from **the** toilet ...
- (18) 10.2. a-symptomatic → asymptomatic

⁴ Baert, L.; Debevere, J. & Uyttendaele, M. (2009). The efficacy of preservation methods to inactivate foodborne viruses. Int. J. Food Microbiol. 131 (2-3), p. 83-94

- (19) 10.2. Footnote 2 is on the previous page.
- (20) Title - Annex II - Delete "ANNEX TO"
- (21) Annex II – Title - ~~ANNEX TO THE~~ CONTROL OF HEPATITIS A VIRUS (HAV) AND NOROVIRUS (~~NOV~~ NoV) IN BIVALVE MOLLUSCS
- (22) Annex III – Introduction - Para 3: an important reason of contamination of food handlers' hands is **due to not practicing appropriate personal hygiene after using the toilet**, changing diapers, cleaning toilet areas, etc.
- (23) Annex III Section I + II: ~~A~~annex
- (24) Annex III 2.1 - Para 2 - Last sentence: Moreover, reference will be made to ~~other~~ documents. But the mentioned documents were already summed up in the previous sentence.
- (25) Annex III - Section III "... taking into account the conditions **that are** specific to the primary ..." or even better rephrase.
- (26) Annex III 3.2 - It needs to be verified if the corrective actions **were effective**.
- (27) Annex III Section V: Put the reference in as before (as in section X).