

# codex alimentarius commission



FOOD AND AGRICULTURE  
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Agenda Item 8

CX/FFP 09/30/9-Add.1

## JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

Thirtieth Session

Agadir, Morocco

28 September – 2 October 2009

### PROPOSED DRAFT CODE OR PRACTICE ON THE PROCESSING OF SCALLOP MEAT

#### COMMENTS AT STEP 3

(International Food Additives Council)

#### IFAC

##### Section X.2.2.3 “Added Water”

In the sixth line of the first paragraph of this section and the second line of the second paragraph, “polyphosphates,” should be changed to phosphates. Phosphates other than polyphosphates are useful in this application, for example orthophosphates can be used.

While it is true that phosphates, if used improperly, may bind added water it should be noted that phosphates are important to maintaining the integrity of the scallop adductor muscle meat. The application of phosphates for use in Quick Frozen Scallop Adductor Muscle Meat was developed to reduce moisture loss due to freeze/thaw or cooking, reduce loss of water-soluble nutrients, and improve sensory characteristics, i.e., appearance, odor, flavor, and texture, of cooked products.

##### Section X.3.2.4 Application of Additives to Scallop Meat (Processing Steps 10, 18, 19)

###### *Technical Guidance:*

In the first three bullets, polyphosphates should be changed to phosphates. The following references may be of interest to the Committee:

Fisher, R.A., Dupaul, W.D., Rippen, T.E., *Journal of Muscle Foods*, 7 (1996) pp. 73-92.

Fischer et al. state that "Upon offloading, scallops are handled in a variety of ways depending on market requirements and preferences. However, most landed sea scallops are washed and/or processed with sodium tripolyphosphate (STP) or other food grade phosphates." They evaluated six processing methods:

Wash: 20 min wash in fresh water (pH 7.5)

Wash: 20 min wash in 4.0% STP + 1.0 % NaCl (pH 8.3)

STP Dip: 20 min wash in fresh water PLUS a 1 min Dip in 10 % STP + 1.0 % NaCl (pH 8.3)

STP Processed: Held in a 2.5 % STP + 1.0 % NaCl solution (pH 8.3) for three times - 5 hours, 13 hours, & 24 hours

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Rippen, T.E., Sutton, H.C., Lacey, P.F., Lane, R.M., Fisher, R.A., and Dupaul, W.D., *Journal of Muscle Foods*, 7 (1996) pp. 93 -108.

Rippen et al. state that "Sea scallops are traditionally washed, bagged, ice chilled (in summer) and stowed surrounded with ice in bins onboard harvest boats, then washed or held in chilled sodium tripolyphosphate solutions at processing plants prior to packing."

Also: "Alkaline polyphosphates are most frequently used in seafood and meat formulations to improve water binding, texture and other functional properties."

Rippen et al. used the same six processing methods as Fischer et al. except for the STP Processed, which they held in the solution for the time needed to achieve moisture content targets of 82%, 84%, and 86%.

Molins, R.A., *Phosphates in Food*, Boca Raton, FL: CRC Press (1991), p.155, covers spraying scallops with STPP solutions.