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# SPECIFICATION FOR QUICK FROZEN LOBSTERS

(FIRST REVISION)



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# SRI LANKA STANDARD SPECIFICATION FOR QUICK FROZEN LOBSTERS (FIRST REVISION)

#### FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution on 1987-07-27, after the draft, finalized by the Drafting Committee on Quick Frozen Lobsters, had been approved by the Agricultural and Food Products Divisional Committee.

This specification was first published in 1973. The industry has growth rapidly since then and at present contributes a substantial amount to the foreign exchange earnings of the country. In view of the knowledge and experience hitherto gained, it has become necessary to revise the standard.

Several changes have been made to this revision which are too numerous to be highlighted in the Foreword. It does not give details of processing requirements and hygienic requirements given in the original specification since these aspects are covered in SLS 208.

This revision provides for size-grading as agreed to between the purchaser and supplier. The requirements for net contents and size have been excluded from the criteria for conformity of a lot since it would require thawing of all master cartons selected. However, methods for their determination and permissible tolerance limits for size have been recommended. The microbiological limits specified in the revision are included to offer guidance on the raw material quality, hygienic practice and processing conditions under which the product has been processed. Non-conformity to these limits other than these for Salmonella should not be considered as sufficient criteria for rejection of a lot or consignment of these products. This condition may warrant further investigations.

All standard values are given in SI units. For the purpose of size classification, values may be expressed in SI units or as agreed to between the purchaser and supplier.

In the preparation of this specification valuable assistance derived from publication of the Codex Alimentarius Commission and the International Commission on Microbiological Specification for Foods is gratefully acknowledged.

#### 1 SCOPE

- 1.1 This specification prescribes the requirements and methods of sampling and test for quick frozen raw lobsters and quick frozen cooked lobsters.
- 1,2 This specification does not apply to speciality packs where the flesh of the lobsters constitute only a portion of the edible contents.

#### 2 REFERENCES

- CS 79 Edible common salt
- CS 168 Coconut toddy vinegar
- SLS 208 Code of hygienic practice for the processing of quick frozen lobsters and prawns
- SLS 428 Random sampling methods
- SLS 516 Microbiological test methods
  - Part 1 General guidance for enumeration of micro-organisms
  - Part 5 General guidance for detection of Salmonella
  - Part 6 Enumeration of Staphylococcus aureus
- SLS 614 Potable water
  - Part 1 Physical and chemical requirements
  - Part 2 Bacteriological requirements

#### 3 DEFINITIONS

For the purpose of this specification the following definitions shall apply:

- 3.1 lobster: Decapod crustaceans of the following species:
- a) Species belonging to the genera *Palinurus* and *Panulirus* of the family *Palinuridae*;
- b) The species Phenus orientalis belonging to the family Scyllaridae.
- 3.2 raw lobsters: Lobsters not exposed to temperatures over 38 °C.
- 3.3 cooked lobsters: Lobsters exposed to steam or hot water for a period of time as agreed to between the purchaser and the supplier.
- 3.4 quick frozen lobsters: Suitably prepared lobsters subjected to freezing process in which the temperature is reduced to a value between -1  $^{\circ}$ C to -5  $^{\circ}$ C within 3 hours of being placed in the freezer. The quick freezing process shall be continued until the temperature of the product is at least -18  $^{\circ}$ C and preferably -30  $^{\circ}$ C.
- 3.5 defects: For definitions see Appendix A.

#### 4 INGREDIENTS

Food additives used shall comply with the Food Act No. 26 of 1980 and the regulations framed thereunder. They shall be of food grade. Only the following additives may be used in the processing of lobsters.

#### 4.1 Antioxidants

Sodium ascorbate or potassium ascorbate, expressed as ascorbic acid, 400 mg/kg, max.

#### 4.2 pH regulating agent

Citric acid, -400 mg/kg, max.

#### 4.3 Salts for drip-loss prevention

- 4.3.1 Triphosphate, pentasodium, pentapotassium or calcium (Na, K or Ca tripolyphosphates).
- 4.3.2 Polyphosphate of sodium (sodium hexametaphosphate) expressed as phosphorus pentoxide, 5 g/kg, max.

#### 4.4 Preservatives

Sulfite, bisulfite or metabisulphite of sodium or potassium, expressed as sulfurdioxide, 100 mg/kg, max. in the raw product and 30 mg/kg, max. in cooked product, singly or in combination.

#### 4.5 Salt

Conforming to CS 79.

- 4.6 Lemon juice
- 4.7 Spices
- 4.8 Vinegar

Conforming to CS 168 or SLS 625.

#### 5 TYPES

Lobsters and lobster products shall be presented as follows:

- Type 1 (whole lobster)
- Type 2 (half/split lobster) whole, split with head on, into two approximate halves down the centre line of the back. Cleaned with viscera removed.
- Type 3 (lobster tail) tail shell on, intestinal tract removed and the cavity clean.

Type 4 (lobster tail meat) - tail meat with shell off, intestinal tract removed. Each piece comprising:

- a) whole of the tail; or
- b) a piece obtained by cutting the meat in a tail longitudinally into two pieces; or
- c) a piece obtained by cutting the meat in a tail transversely into not more than four pieces.

Type 5 (lobster meat) - the meat of any part of the lobster without shell.

The above products may be raw or cooked.

NOTE - Raw whole quick frozen lobsters are not recommended for trade.

#### 6 REQUIREMENTS

#### 6.1 Raw material

- 6.1.1 The quick frozen lobsters and lobster products shall be prepared from fresh, clean and sound lobsters of the designated families (see 3.1) and shall be suitable for human consumption.
- 6.1.2 The quick frozen lobsters and lobster products shall not show any visible sign of spoilage. The colour shall be typical of freshly caught lobsters of the respective families. The meat shall be firm and shall be typical of the odour of freshly caught lobsters.

#### 6.2 Processing

6.2.1 The quick frozen lobsters and lobster products covered by this specification shall be prepared in accordance with SLS 208.

The recognized practice of repacking quick frozen products under controlled conditions followed by the re-application of the quick freezing process as defined is permitted.

- 6.2.2 The quick frozen lobsters and lobster products shall either be quick frozen in mass or as individual units. If individually quick frozen, the units shall be packed in such a way as to maintain their individual separation until the time of final sale.
- 6.2.3 The quick frozen lobsters and lobster products may also be glazed either individually or in bulk. When glazed, the coating of ice shall cover the lobster so as to minimize dehydration and oxidation. The water used shall be potable water conforming to SLS 614. Additives as listed in 4 may be used for glazing.

#### 6.3 Final product

## 6.3.1 Physical requirements

#### 6.3.1.1 Appearance

The lobsters and lobster products shall have the following appearance and characteristics:

- a) In the case of raw lobsters with shell on, the colour of the shell shall generally be uniform and characteristic of the species and habitat or area from which harvested;
- 5) The products shall be easily separated without the necessity of thawing when labelled as individually quick frozen;
- c) In the case of the raw product, the flesh shall be white or pink as appropriate and translucent rather than opaque;
- d) In the case of cooked products, the flesh shall be white or pink as appropriate with no translucence indicating under cooking;
- e) The shell shall be firm and unbroken and reasonably free from detatched legs or antennae, as appropriate to the type (see 5);
- f) Tail meat and lobster meat shall be practically free from shell, alimentary tract, viscera and blood;
- g) All types shall be reasonably free from extraneous matter, algae and calcareous growth; and
- h) All types shall be reasonably free from dehydration (freezer-burn) blackening or any other abnormal discolouration.

When evaluated for defects described in Appendix A, quick frozen lobsters and lobster products shall not exceed the tolerance given in Tables 2, 3 and 4 of Appendix C.

#### 6.3.1.2 Odour and flavour

After thawing in accordance with 10.1, the lobsters and lobster products shall have a good characteristic odour. After cooking in accordance with 10.2, the lobsters and lobster products shall have a good, characteristic flavour and odour (see Note). It shall be free from any objectionable flavour or odour. Flavour and odour shall be evaluated as given in Appendix C.

NOTE - Cooked products shall be thawed but not re-cooked to assess flavour and odour.

#### **6.3.1.3** Texture

After thawing in accordance with 10.1, and cooking in accordance with 10.2, the flesh of lobsters and lobster products shall be firm (see Note). The flesh shall not be mushy or gelatinous. Texture shall be evaluated as given in Appendix C.

NOTE - Cooked products shall be thawed but not re-cooked to assess texture.

## 6.3.2 Size classification

Quick frozen lobsters and lobster products of Types 1, 2 and 3 (see 5) shall be graded according to mass, expressed either in SI units of as required by the country in which the product is sold. Grading shall be as agreed to between purchaser and vendor and subject to the tolerance provided in Appendix  $D_{\bullet}$ 

# 6.3.3 Microbiological limits

- 6.3.3.1 Quick frozen lobsters and lobster porducts, when tested in accordance with SLS 516:Part 5, shall be free of Salmonella.
- 6.3.3.2 Tests for micro-organisms specified in Table 1 shall be carried out to monitor the hygienic conditions of processing.

Sl. No.	Micro-organisms	Raw quick frozen				Cooked quick frozen			Method of test	
.,		!		Limit per g		'	Limit per g		according	
	÷	n	C	ŗn.	М	.n	c	m	М	to
(1)	(2)	(3)	(4)	(5)	(6)·/	(7).	(8)	(9)	(10)	SLS 516 (11)
i)	Aerobic plate count	5	3	10 <sup>6</sup>	10 <sup>7</sup>	5	2	5×10 <sup>5</sup>	10 <sup>6</sup>	Part 1
ii)	Staphylococcus aureus	- 5	3	500	2 000	6	1	500	2 000	Part 6

TABLE 1 - Microbiological limits

# where,

- n = number of sample units;
- $c = \max_{m \in M} \min_{m \in M}$
- m =bacterial limit under which a count is acceptable for any sample unit: and
- M = bacterial limit above which a count is unacceptable for any sampling unit.

#### 7 PACKAGING

- 7.1 The packaging of all types of lobsters and lobster products shall be so as to ensure that the product is properly protected from mechanical damage, leakage and dehydration.
- 7.1.1 The materials used in packaging shall be new and shall not impart any injurious substances to the product.
- 7.2 Raw and cooked quick frozen lobsters and lobster products of Types 1, 2 and 3 (see 5) when packed shall be individually wrapped in an immediate wrapper of polythene of other suitable material having similar moisture-proof characteristics such that all exposed meat is covered.

7.3 Material which imparts flavour or in any way causes discolouration of the product, or is itself discoloured by contact with the product shall not be used as the immediate wrapper.

NOTE - Staples shall not be used with the immediate wrapper.

- 7.4 Raw and cooked quick frozen lobsters and lobster products shall be packed in a single service inner container (inner carton) manufactured from:
- a) Cardboard with a water-vapour-proof liner; or
- b) Waxed cardboard with a water-vapour-proof inner liner; or
- c) Welded polyethylene or other suitable plastic material.
- 7.5 All inner containers (inner cartons) shall be packed in an outer container (Master carton). Outer containers (master cartons) shall be wire-bound or strapped with any other suitable material.
- 7.6 Only one type of lobsters or lobster products (see 5) shall be packed in any one outer container (master carton).

NOTE - Inner containers containing lobsters of different sizes may be packed in one outer container (master carton) but this shall be avoided as much as possible.

#### 8 MARKING

# 8.1 Outer container (master carton)

The following information and such other information which may be required by the importing country shall be marked clearly, legibly and indelibly on every outer container (master carton), or on a label securely attached thereto:

- a) The variety, as *lobster* or *rock lobster* or *spiny lobster* if derived from the family Palinuridae, and the words *slipper lobster* if derived from the family Scyllaridae;
- b) The type as given in 5;
- c) The word cooked if the lobsters or lobster products have been cooked;
- d) The term Quick frozen or the term Individually quick frozen or IQF if the lobsters or lobster products have been individually quick frozen;
- e) Usual or common trade name of the variety may be added so long as it is not misleading to the consumer in the country in which the product will be distributed;
- f) Size classification (see 6.3.2);
- g) Net contents in SI units or as agreed to between the purchaser and supplier;

NOTE - Where the product has been glazed, the declaration of net contents of the product shall be exclusive of the glaze;

- h) The name and address of the exporter (including country of origin);
- i) Identification of processing factory in code; and

j) Lot identification in code or in clear.

#### 8.2 Inner container (inner carton)

The information given in a), c) and f) of 8.1 and such other information which may be required by the importing country shall be marked clearly, legibly and indelibly on every inner carton.

#### 9 SAMPLING

Representative samples of lobsters and lobster products for testing shall be drawn in accordance with appendix E.

#### 10 METHODS OF TEST

#### 10.1 Thawing

Thawing shall be done in accordance with the method prescribed in Appendix F.

#### 10.2 Cooking

Cooking shall be done in accordance with the method prescribed in Appendix G.

# 10.3 Examination of physical defects

The product shall be examined according to Appendix C for physical defects described in Appendix A.

#### 10.4 Organoleptic assessment

The organoleptic assessment of the product shall take place after the sample has been thawed'in accordance with the procedure set out in Appendix E.

To evaluate the odour, flavour and texture, raw lobsters or lobster products shall be cooked by the method given in Appendix G. Odour shall be evaluated prior to cooking as well.

NOTE - Cooked lobster products shall not be re-cooked to evaluate odour, flavour and texture.

#### 10.5 Net contents

Determination of net contents of a container (master carton) and determination of mass of an individual lobster or lobster products shall be done in accordance with Appendix H.

#### 10.6 Microbiological limits

The material shall be tested for Salmonella as specified in 6.3.3.1 and for other micro-organisms included in Table 1 according to the methods specified in Column 11 of the table.

#### 11 CRITERIA FOR CONFORMITY

- 11.1 The lot shall be considered to be in conformity with the requirements of the specification if the conditions specified in Clauses 11.1.1 and 11.1.2 are satisfied.
- 11.1.1 Salmonellae

Salmonellae are not detected in any of the 5 samples units tested as in E.4.1.

11.1.2 The number of defective sample units when tested as in E.4.2 is less than or equal to the corresponding permissible number of defective sample units given in Column 4 of Table 5.

#### APPENDIX A

#### DEFINITION OF DEFECTS

For the purpose of this specification, the following definitions shall apply.

- A.1 dehydration: Exposed surface areas of meat which have a which appearance or dryness affecting the texture or palatability.
- A.2 abnormal colouration: Colouration of meat or membrane on the underside of the tail that deviates from the characteristic colour of the species and habitat or area from which the lobster is harvested.
- NOTE The natural black colour of lobsters found in certain areas, for example, Jaffna, Tangalle, should not be mistaken for black discolouration.
- A.3 black spots: Darkened areas occuring to such an extent that quality is seriously affected.
- A.4 opacity: In the case of raw products, the flesh which is opaque rather than translucent.
- A.5 soft shell: Shell not firm and easily flexed by hand.
- A.6 damage: a) Cuts or scars penetrating the shell; crushed or cracked shell.
- NOTE Antenna and appendages removed or broken should not be regarded as damage.
- b) In the case of Type 2 and Type 3, having less than five tail segments from the posterior.
- A.7 incomplete removal of moisture: Portion of intestine or intestinal contents remaining.
- A.8 extraneous matter: Presence of flies, insects, hair, sand, dirt, calcareous growth, algae, staples, and other foreign matter.
- A.9 shell fragments: Perceptible pieces of shell.

APPENDIX B
APPLICABILITY OF DEFECTS

Defect	Application					
	Raw whole lobster (Type 1)	Cooked whole lobster (Type 1)	Raw lobster tail, half/split lobster (Types 2 & 3)	Lobster tail meat and lobster meat (Types 4 & 5)		
Dehydration	-	-	X	Х		
Abnormal colouration	x	x	x	x		
Black spots	Х	x	X	Х		
Opacity	Х	_	х	x		
Damage a)	X	x -	x x	-		
Incomplete removal of intestine	-	-	x	<u>-</u>		
Soft shell	x	X	X	-		
Shell fragments	-	<del>-</del>	-	X		

# APPENDIX C EVALUATION OF PHYSICAL REQUIREMENTS (See 6.3.1)

All lobster products shall be physically examined either non-destructively (without thawing) or destructively (after thawing) for defects listed in Tables 2, 3 and 4.

Points shall be awarded for each defect and the sum total shall be added per sample unit. A sample unit shall be considered defective if it exceeds the permissible number of points as given in C.1.2, C.2.1.1, C.2.2.1 and C.3.1.1 as applicable.

# C.1 EXAMINATION OF WHOLE LOBSTERS (TYPE 1)

C.1.1 Whole lobsters shall be subjected to destructive physical examination for defects listed in Table 2.

TABLE 2 - Destructive physical examination of whole lobster (Type 1) half/split lobster (Type 2) and lobster tail (Type 3)

Defect (See Appendix A)	Minor	Major	Serious
Dehydration (applicable only to types 2 and 3)			
a) 10 per cent to 20 per cent of exposed surface area		2	-
b) more than 20 per cent of exposed surface area	-	-	4
Abnormal colour (area affected):			
a) Whole lobsters up to 900 g or lobster tail unit over 300 g or half lobster over 450 g:			
(i) 100 mm <sup>2</sup> to 225 mm <sup>2</sup>	_	2	-
(ii) more than 225 mm <sup>2</sup>	-	-	6
b) Whole lobster over 900 g or lobster tail unit over 300 g or half lobster over 450 g:			
(i) $100 \text{ mm}^2$ to $225 \text{ mm}^2$	1	_	_
(ii) $225 \text{ mm}^2$ to $2500 \text{ mm}^2$	-	2	
(iii) more than 2 500 mm <sup>2</sup>	-	-	6
Black spots	_	_	4
Damage			
a) Less than 5 tail segments (applicable only to Type 3)	1	_	_
b) Cut/scars	1.		_
c) Cracked or crushed shell	-	2	-
Incomplete removal of intestine (applicable only to Type 3)		-	4
Soft shell	-	2	_
Opacity (applicable to raw products)	_	2	_
Texture (cooked state)			
a) Tough or fibrous	_	2-	-
b) Mushy or gelatinous	<b>-</b> .	-	6
Objectionable odour - raw state	_	-	4
Objectionable odour/flavour - cooked state	-	_	6

C.1.2 A sample unit shall be considered defective if it has:

a) more than 4 points for defects classified as serious defects; or

b) more than a total of 6 points in combination for defects classified as serious and major defects; or

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- c) more than a total of 8 points in combination for defects classified as serious, major and minor defects.
- C.2 EXAMINATION OF HALF/SPLIT LOBSTERS (TYPE 2) AND LOBSTER TAILS (TYPE 3)
- C.2.1 Half/split lobsters and lobster tails shall be initially subjected to non-destructive physical examination for defects listed in Table 3.

TABLE 3 - Non-destructive physical examination of half/split lobsters (Type 2) and lobster tails (Type 3)

(Examination without thawing)

A sample unit is 1 half/split lobster or 1 lobster tail (see E.2).

Defect	Minor	Major	Serious
Dehydration			~
a) 10 per cent to 20 per cent of exposed surface area	_	2	-
b) more than 20 per cent of exposed surface area		_	4
Abnormal colour (area affected)			
a) Split lobsters up to 450 g or tail units up to 300 g			
(i) $100 \text{ mm}^2 \text{ to } 225 \text{ mm}^2$	-	2	-
(ii) more than 225 mm <sup>2</sup>	-		6
b) Split lobsters over 450 g or tail units over 300 g			
(i) $100 \text{ mm}^2$ to $225 \text{ mm}^2$	.1	-	-
(ii) $225 \text{ mm}^2$ to $2500 \text{ mm}^2$	_	2	_
(iii) more than 2 500 mm <sup>2</sup>	_	-	6
Damage			
a) Less than 5 tail segments	1	_	-
b) Cuts/scars	1	-	-
c) Cracked/crushed shell	-	2	_
Opacity (applicable only to raw products)	-	2	- 1

- C.2.1.1 A sample unit shall be considered defective if it has:
- a) more than 4 points for defects classified as serious defects; or
- b) more than a total 6 points in combination for defects classified as serious and major defects; or
- c) more than a total of 8 points in combination for defects classified as serious, major and minor defects.
- C.2.2 A sample unit which obtains more than 2 points for defects classified as major or minor defects singly or in combination according to Table 2, but is not a defective as defined in C.2.1.1 shall be destructively examined for physical defects listed in Table 2.

- C.2.2.1 The sample unit shall be considered defective if it has:
- a) more than 4 points for defects classified as serious defects; or
- b) more than a total of 6 points in combination for defects classified as serious and major defects; or
- c) more than a total of 8 points in combination for defects classified as serious, major and minor defects.

## C.3 EXAMINATION OF LOBSTER TAIL MEAT (TYPE 4) AND LOBSTER MEAT (TYPE 5)

- C.3.1 Lobster tail meat and lobster meat shall be subjected to destructive physical examination for defects listed in Table 4.
- C.3.1.1 A sample unit shall be considered a defective if it has:
- a) more than 4 points for defects classified as serious; or
- b) more than a total of 6 points in combination for defects classified as serious and major defects; or
- c) more than a total of 8 points in combination for defects classified as serious, major and minor defects.

#### APPENDIX D

#### TOLERANCE FOR UNIFORMITY OF SIZE

(Applicable to Types 1, 2 and 3 only)

The average mass of lobsters in a container, determined by dividing the total mass of the lobsters and lobster products by number, shall be within the designated mass range. Not more than 10 per cent of lobsters or lobster products by number may be outside the designated size range.

#### APPENDIX E

#### SAMPLING

#### E.1 LOT

In any consignment all master cartons containing lobsters or lobster products of the same type shall be grouped together to constitute a lot.

#### E.2 SAMPLE UNIT

Definitions of sample unit for different types are given below:

Type 1 (whole lobster)

- one whole lobster

Type 2 (half/split lobster)

- half/split lobster

Type 3 (lobster tail)

- one lobster tail

TABLE 4 - Destructive physical examination of tail meat (Type 4) and meat (Type 5)

(Examination in the thawed state)

A sample unit is 400 g of tail meat or meat (see E.2).

Defect	Minor	Major	Serious
Dehydration-cooked and raw meat (per cent affected			
by mass) a) 10 per cent to 20 per cent		2	
b) more than 20 per cent	-	-	4
Abnormal colour of meat (per cent affected by mass) a) Light discolouration		,	i
(i) Up to 10 per cent	1	-	-
(ii) more than 10 per cent	_	2	ĺ - ĺ
b) Dark ciscolouration more than 10 per cent	_	-	4
Incomplete removal of intestine (applicable to Type 4 only) per cent affected by mass	,	2	
a) Up to 10 per cent	-	2	
b) more than 10 per cent	_		4
Shell fragments and extraneous material (no. of pieces/sample unit)		_	
a) 1 piece	1	2	
b) 2 to 3 pieces	-	<i>a</i>	
c) more than 3 pieces		-	4
Opacity (applicable to raw tail meat only) par cent affected by mass: a) Up:to 5 per cent		2	
b) more than 5 per cent		]	4
of more didit o list conc			
Texture (cooked state), per cent affected by mass a) Tough or fibrous		2	
(1) Up to 10 per cent	-	*	_
(11) more than 10 per cent	_		*
b) Mushy or gelatinous (1) Up to 5 per cent			4
(ii) more than 5 per cent	-	-	6
Objectionable cdour - raw state	F14	-	4
Objectionable flavour or odour - cooked state	_	-	6

Type 4 (lobster tail meat)

- 400 g of lobster tail meat

Type 5 (lobster meat)

- 400 g of lobster meat.

#### E.3 SCALE OF SAMPLING

E.3.1 The number of master cartons to be selected shall depend on the number of master cartons in the lot and shall be in accordance with Table 5.

Number of master cartons in the lot	Number of master cartons to be selected (2)	Number of sampling units to be selected (3)	Acceptance number (4)
Up to 15	2 2	10	. 0
16 to 50	3	13	0
51 to 150	5	18	1
151 to 300	8	25	2
301 to 500	13	37	3
501 and above	20	55	5

TABLE 5 - Scale of sampling

- E.3.3 The number of sample units to be selected from the lot shall be in accordance with Column 1 and 3 of Table 5. As far as possible, an equal number of sample units shall be selected from each inner container (inner carton) selected as in E.3.2 to obtain the required sample units.
- E.3.4 Master cartons, inner containers (inner cartons) and sample units shall be selected at random. In order to ensure randomness of selection random number tables as given in SLS 428 shall be used.

#### E.4 NUMBER OF TESTS

- E.4.1 Five samples units shall be selected and tested for micro-organisms (see 6.3.3).
- E.4.2 The remaining sample units selected as in E.3.3 shall be tested for requirements given in 6.3.1.1 (appearance) 6.3.1.2, (odour and flavour) and 6.3.1.3 (texture).

NOTE - In the case of Type 2 (half/split lobsters) and Type 3 (lobster tails), non-destructive physical examination shall be carried out first (see C.2).

E.3.2 From each master carton selected as in E.3.1, one inner container (inner carton) shall be selected.

#### APPENDIX F

#### THAW ING

A sample is thawed by enclosing it in a film-type bag and immersing in an agitated water bath held at ambient temperature.

If lobster products are individually quick frozen, complete thawing of the product is determined by gently squeezing the bag occasionally so as not to damage the texture of the lobster product, and until no hard core or ice crystals are felt.

If the product is block frozen, turn the block over several times during thawing. The point at which thawing is complete can be determined by gently probing the block apart and until no hard core or ice crystals are felt.

#### APPENDIX G

#### COOKING

The raw quick frozen lobsters and lobster products shall first be thawed as described in Appendix F.

Cut from the lobster or lobster product, pieces of lobster meat 10 mm to 20 mm thick and place about 75 g of this, after rinsing in water, in a low density polyethylene bag of thickness 50  $\mu m$  to 80  $\mu m$ . Into the bag, add 100 ml of one per cent common salt solution and tie the bag so that water will not get into the bag when cooking. The bag should be of such a size that the lobster meat is completely covered by the salt solution.

The bag is then suspended in boiling water and the part of the bag containing lobster meat shall be kept well beneath the level of water by weighing it down. After the water returns to a boil cook for 9 minutes. (More than one sample may be cooked at a time, provided the water returns to boil within 2 minutes).

Remove the bag, drain and cool approximately to room temperature (do not refrigerate). Evaluate odour, flavour and texture.

#### APPENDIX H

DETERMINATION OF NET CONTENT OF LOBSTERS AND LOBSTER PRODUCTS IN A CONTAINER AND MASS OF INDIVIDUAL UNITS

- H.1 DETERMINATION OF NET CONTENT OF LOBSTERS AND LOBSTER PRODUCTS IN A CONTAINER
- H.1.1 Open the package containing quick frozen lobsters, immediately after removal from low temperature storage and thaw according to Appendix F.

- H.1.2 Weigh a dry clean sieve with woven wire cloth with nominal size of the square aperture 2.8 mm. The sieve must be of a diameter appropriate to the size of the lobsters.
- H.1.3 After all the glaze that can be seen or felt has been removed, empty the contents of the container on the previously weighed sieve.
- ${\tt H.1.4}$  Weigh the sieve containing the drained product. Substract the mass of the sieve; the resultant figure shall be considered to be the net mass of the container.

#### H.2 DETERMINATION OF MASS OF AN INDIVIDUAL LOBSTER

H.2.1 After thawing the product as indicated in H.1.1 and draining as indicated in H.1.3 all the lobsters in the container shall be weighed individually to the nearest gram for determining the tolerance for uniformity.

NOTE - Storage of product may cause or contribute to low net mass (whether or not the product has been glazed).



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