SRI LANKA STANDARD 10 : 1991

UDC 639 . 512

SPECIFICATION FOR

QUICK FROZEN PRAWNS OR SHRIMPS

(SECOND REVISION)

SRI LANKA STANDARDS INSTITUTION

SPECIFICATION FOR QUICK FROZEN PRAWNS OR SHRIMPS
(SECOND REVISION)

SLS 10 : 1991

Gr. 10

SRI LANKA STANDARDS INSTITUTION
53, Dharmapala Mawatha,
Colombo 3,
Sri Lanka.

DRAFTING COMMITTEE ON QUICK FROZEN PRAWNS

CONSTITUTION

CHAIRMAN	*REPRESENTING*
Mr T.S.G. Fonseka	National Aquatic Resources Agency
MEMBERS	
Mr C.B. Jayasundara	Andriesz and Company Limited
Dr (Mrs) M.V.E. Attygalle	University of Sri Jayawardenepura
Mr Y.P. Sirisoma	Ceylon Fisheries Corporation
Dr R.A. Pathirana	Lever Aqua Products Limited
Dr R.S.B. Wickramasinghe	Medical Research Institute
Mr W.S. Jason	Sea Food Exporters' Association
Mr M.K. Chandrasiri	Sea Food Exporters' Association
Mr Joe Fernando	Sea Food Exporters' Association
Mr L.L.S.S.K. de Silva	Sri Lanka Standards Institution
Miss S.P.K. Jayawardene	Sri Lanka Standards Institution

TECHNICAL SECRETARIAT

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This standard does not purport to include all the necessary provisions of a contract.

SRI LANKA STANDARD

SPECIFICATION FOR QUICK FROZEN PRAWNS OR SHRIMPS
(SECOND REVISION)

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution 1991-12-31, after the draft, finalized by the Drafting Committee on Quick Frozen Prawns, had been approved by the Agricultural and Food Products Divisional Committee.

The first revision of this specification was issued in 1981. The main changes made to this revision has been the introduction of a requirement for the uniformity of size, the inclusion of an additional grade with respect to physical defects and the adoption of a widely used classification to detect decomposition levels in frozen prawns. Changes have also been made to the microbiological limits and the sampling.

During the formulation of this specification due consideration has been given to the relevant provisions made under the Sri Lanka Food Act No. 26 of 1980. Specific requirements given in this specification, wherever applicable, are in accordance with the relevant regulations. However, general provisions made under the Sri Lanka Food Act have not been included in this specification and therefore, the attention of the user of this specification is drawn to the general provisions made in the regulations framed under the Food Act.

For the purpose of deciding whether a particular requirement of this specification is complied with, the final value, observed or calculated, expressing the result of a test or an analysis, shall be rounded off in accordance with CS 102. The number of significant places retained in the rounded off value shall be the same as that of the specified value in this specification.

In the preparation of this specification, the valuable assistance derived from the publications of the Codex Alimentarius Commission of the Food and Agricultural Organization and the Food and Drugs Administration of the USA is gratefully acknowledged.

1 SCOPE

1.1 This specification covers the requirements, methods of sampling and test for raw and cooked quick frozen prawns or shrimps.

1.2 It does not apply to speciality packs where the prawns or shrimps constitute only a portion of the edible contents.

2 REFERENCES

SLS 79 Edible common salt
CS 102 Presentation of numerical values.
CS 124 Test sieves.

SLS 191 Sugar
SLS 208 Code of hygienic practice for processing of lobsters and prawns.
SLS 428 Random sampling methods.
SLS 467 Labelling of prepackaged foods
SLS 516 Microbiological test methods.
SLS 614 Potable water

3 DEFINITIONS

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

3.1 prawns/shrimps : Fresh, wholesome prawns or shrimps belonging to any commercial species, herein referred to as prawns.

3.2 raw prawns : Fresh, wholesome prawns not exposed to temperatures sufficiently high to coagulate the protein at the surface.

3.3 cooked prawns : Fresh, wholesome prawns that have been heated for a period of time such that the thermal centre of the product reaches a temperature adequate to coagulate the protein.

NOTE

Cooked prawns shall be processed by exposing the raw material to steam or hot water for a period of time as agreed to between the purchaser and supplier.

3.4 quick frozen prawns/shrimps : Suitably prepared prawns subjected to a freezing process so that its range of temperature of maximum crystallization (approximately between -1°C and - 5 °C) is passed within 2 hours. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18 °C at the thermal centre after thermal stabilization (see Note).

NOTE

The above conditions will be satisfied if the temperature of the core drops to - 18 °C within 4 hours in a block of prawn material 50 mm thick which is cooled at a temperature not exceeding - 40 °C.

3.5 count : Number of prawns of comparable size per unit mass.

4 STYLE OF PRESENTATION

Prawns shall be presented in the following styles :

Style 1 - *Whole* head (Cephalothorax), shell and tail fans on.
Style 2 - *Headless shell on,* head (Cephalothorax) removed, shell and all shells including tail fan on.
Style 3 - *Headless peeled and undeveined,* head (Cephalothorax) and all shells including fan tails removed.

Style 4 - *Headless, peeled and deveined,* as style 3 and the vein removed.

Style 5 - *Fan tail round, peeled and undeveined,* head (Cephalothorax) removed and shell removed to the last segment; and the fan tail present.

Style 6 - *Fan tail round, peeled and deveined,* as style 5 and the vein removed.

Style 7 - *Fan tail (split or cutlet),* peeled and deveined as style 5 and also the peeled segments split longitudinally through the dorsal axis, laid open and the vein removed.

Style 8 - *Western style,* as style 5 above and also the peeled segments split completely and longitudinally through the dorsal axis of the first four segments, laid apart and the vein removed.

Style 9 - *Pieces,* where the count of unglazed prawns is greater than 150/kg (70/1b), a prawn consisting of less than 4 segments; and where the count of unglazed prawns is less than or equal to 150/kg (70/1b) a prawn consisting of less than 5 segments. Such pieces may be present in any one of the styles as defined in styles 1 to 8 above.

Style 10- *Meat,* pieces as defined in style 9, but peeled and/or peeled and deveined.

All these styles may be raw or cooked.

5 REQUIREMENTS

5.1 Raw material

5.1.1 Quick frozen prawns shall be prepared from fresh, clean, uncrushed prawns or pre-frozen prawns of any commerical species and shall be of such a quality that it is suitable for human consumption.

5.1.2 Prawns shall not show any visible sign of spoilage. The meat shall be firm and shall have the typical odour of freshly caught prawns if it is not pre-frozen. It shall be free from discolouration and off odours.

5.2 Processing

5.2.1 The 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 defined is permitted.

5.2.2 Prawns shall either be quick frozen individually or in mass.

5.3 Optional ingredients

Water utilized for glazing, cooking or freezing may contain the following optional ingredients:

5.3.1 Salt conforming to SLS 79.

5.3.2 *Lemon juice*

5.3.3 *Natural carbohydrate sweeteners,* sugar used shall conform to SLS 191.

5.3.4 *Seasonings,* spices, flavourings

5.4 Final product

5.4.1 *Appearance*

Prawns shall have the following characteristics:

a) The prawns shall be clean and free from contamination with flies, maggots, larvae, hair or any objectionable extraneous matter.
b) The prawns shall be generally uniform in size within any count category where appropriate.
c) The prawns shall be easily separated when labelled as individually quick frozen.
d) Raw prawns of styles 1 and 2 shall have a colour characteristic of the species and habitat or area of harvesting.
e) Prawns shall conform to the limits given in Table 4 and Table 5 as applicable for different types of physical defects described in Appendix A, when tested in accordance with 10.4.
f) Prawns shall be free from pieces in any style except as provided for in Style 9.

5.4.2 *Odour*

When tested in accordance with 10.2, the prawns shall have a good characteristic odour. It shall be free from odours such as those of hydrogen sulfide, ammonia, trymethyl amine, or any other foreign odour such as kerosene, petroleum or formaline. A natural odour reminiscent of iodoform will not be considered a defect unless excessive. The prawns shall have an acceptable odour above the levels of decomposition defined in Appendix B and described below:

5.4.2.1 5 per cent or more by count of the prawns in a sample unit shall show class 3 decomposition; or

5.4.2.2 20 per cent or more by count of the prawns in a sample unit shall show class 2 decomposition; or

5.4.2.3 The percentage by count of prawns having class 2 decomposition plus four times the percentage of prawns showing class 3 decomposition shall constitute not more than 20 per cent or more of the sample unit.

5.4.3 *Glazing*

Prawns may be glazed either individually or in bulk. When glazed, the coating of ice shall cover the prawns so as to minimize dehydration and oxidation. The water used in glazing shall be of potable quality conforming to SLS 614. Any ingredient or additive listed in 5.3 and 6 may be used in glazing.

5.4.4 *Size classification*

Quick frozen prawns of any style may be sized or unsized. Sized prawns shall be packed by count. The size of the prawns shall be consistent with the declared count. In case of dispute the count shall be determined as in 10.5.

5.4.5 *Uniformity ratio*

The uniformity ratio shall not exceed 1.75, when tested in accordance with 10.3.

5.4.6 *Microbiological limits*

Raw and cooked quick frozen prawns shall conform to the microbiological limits given in Table 1 when tested according to the methods given in Column 11 of the table.

TABLE 1 - Microbiological limits

Sl No.	Microorganism	Raw quick frozen limit per g				Pre-cooked quick frozen limit per g				Method of test Ref. to SLS 516
		n	c	m	M	n	c	m	M	
1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
i)	Aerobic plate Count	5	3	10^6	10^7	5	2	$5x10^5$	10^7	Part 1
ii)	Staphylococcus aureus	5	2	10^3	10^4	5	0	10^3	-	Part 2
iii)	E.Coli	5	3	11	500	5	2	11	500	Part 3
iv)	Salmonella	5	0	0	-	5	0	0	-	Part 5

where,

n is the number of sample units to be tested.
c is the maximum allowable number of sample units yielding values between m and M.
m is the limit below which a count is acceptable for any sample unit;
M is the limit above which a count is unacceptable for any sample unit;

6 FOOD ADDITIVES

The following additives may be used:

6.1 Antioxidant

L - Ascorbic acid, 400 mg/kg, max. in the final product.

6.2 colours

Erythrosine)	30 mg/kg singly or in combination
Ponceau 4 R)	in heat treated products only.

6.3 pH regulating agents

Citric acid, 400 mg/kg, max. in the final product.

6.4 Phosphates

Diphosphates)	
Triphosphate, tetrasodium or)	
Tetrapotassium (Na or K)	
Pyrophosphate))	3 g/kg, expressed as phosphorus
Triphosphate, pentasodium or)	pentoxide, singly or in combination.
Pentapotassium (Na or K)	
tripolyphosphate))	

6.5 Preservatives

Sodium bisulfite, sodium sulfite, sodium hyposulfite, sodium or potassium metabisulfite (for use in the raw product only)	100 mg/kg in the edible part of the raw product; 30 mg/kg in the edible part of the cooked product expressed as SO_2 singly or in combination

6.6 Flavouring agent

Monosodium glutamate

7 PACKAGING

7.1 Raw and cooked quick frozen prawns shall be packed in single service inner cartons manufactured from one of the following:

a) cardboard with a water-vapour-proof liner;
b) waxed cardboard with a water-vapour-proof inner liner; or
c) welded polyethylene or other suitable plastic material.

7.2 The packaging shall be so as to ensure that the product is properly protected from mechanical damage, leakage and dehydration.

7.3 The material used in packaging shall be new and shall not impart injurious substances to the product.

7.4 Material which imparts a flavour or in any way causes discolouration of the product or which is itself discoloured by contact with the product shall not be used as the inner carton.

7.5 Staples shall not be used in the inner carton.

7.6 Inner cartons shall be placed in master cartons which shall be wire-bound or strapped with wire or any other suitable material.

7.7 Only one style of prawns (see 4) and preferably one size (see Note) shall be packed in any master carton.

NOTE

Inner cartons containing prawns of different sizes may be packed in a master carton but this should be avoided as much as possible.

8 MARKING

8.1 Master carton

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

8.1.1 The words "prawn" or "shrimp" whichever is customarily used in the country where the products are to be sold and provided the product is identified to the consumer so that he will not be misled;

8.1.2 Name and address of the exporter;

8.1.3 The style of presentation as indicated in 4;

8.1.4 The word "cooked" if the product has been cooked;

8.1.5 a) The term "quick frozen " or
b) The term individually quick frozen or "IQF" if it has been individually quick frozen.

8.1.6 Usual or common trade names 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;

8.1.7 Size classification (the count as given in 3.5);

8.1.8 Net contents, either in the system international units or avoirdupois units or both systems of measurement (see Note);

NOTE

Where the product has been glazed, the declaration of net content of the product shall be exclusive of the glaze.

8.1.9 The Grade;

8.1.10 Country of origin; and

8.1.11 lot identification in code to identify the processing factory.

8.2 **Inner carton**

The information given in **8.1.1, 8.1.2, 8.1.3, 8.1.6, 8.1.7, 8.1.9** and **8.1.10** and such other information which may be required by the importing country shall be marked or labelled clearly, legibly and indelibly on every inner carton.
In the case of a block a label shall be attached.

9 SAMPLING

9.1 Lot

In any consignment all containers of prawns or shrimps of the same style and size belonging to one batch of processing or supply shall constitute a lot.

9.2 General requirements of sampling

When drawing samples, the following precautions shall be taken:

9.2.1 Samples for microbiological analysis shall be drawn first.

9.2.2 The samples shall be protected against adventitious contamination.

9.2.3 The sampling instruments shall be clean and dry when used. When drawing samples for microbiological examination, the sampling instruments shall be sterilized.

9.2.4 The samples shall be kept in clean and dry glass or suitable containers. The samples for microbiological examination shall be kept in sterilized containers.

9.2.5 Samples shall be stored so that there will be no deterioration of quality of the material.

9.3 Scale of sampling

9.3.1 Samples shall be tested from each lot for ascertaining its conformity to the requirements of this specification.

9.3.2 The number of master cartons and inner cartons to be selected from a lot shall be in accordance with Table 2 or Table 3 as applicable.

NOTE

To determine the number of inner cartons of prawns in a lot, multiply the number of inner cartons in a master carton by the number of master cartons in the lot.

TABLE 2 - Scale of sampling
(The contents of each inner carton of prawns is less than one kilogram)

Number of master cartons in the lot (1)	Number of master cartons to be selected (2)	Number of inner cartons to be selected (3)	Permissible number of inner cartons (acceptance number) (4)
Up to 50	7	7	0
51 to 100	8	8	0
101 to 150	9	9	0
151 to 500	13	13	1
501 and above	15	15	1

TABLE 3 - Scale of sampling
(The contents of each inner carton of prawns is greater than one kilogram but less than or equal to 4.5 kilograms)

Number of master cartons in the lot (1)	Number of master cartons to be selected (2)	Number of inner cartons to be selected (3)	Permissible number of defective inner cartons (acceptance number) (4)
Up to 25	5	5	0
26 to 50	6	6	0
51 to 100	8	8	0
101 to 150	10	10	0
151 and above	13	13	1

9.3.3 The inner cartons and master cartons shall be selected at random. In order to ensure randomness of selection, Tables of random numbers as given in SLS 428 shall be used.

9.4 Number of tests

9.4.1 Each inner carton or master carton selected as in 9.3.2 shall be inspected for packaging and marking requirements .

9.4.2 Five inner cartons shall be separated from the inner cartons selected as in 9.3.2 and approximately 250 g shall be taken from the contents of each of these inner cartons and individually tested for microbiological limits.

9.4.3 After seperating out the prawns required for microbiological tests, the remaining contents of each inner carton referred to in 9.4.2 shall be immediately tested for odour (see 5.4.2), and physical defects (see 5.4.1).

NOTE
Care shall be taken to carry out the test for odour without delay so that decomposition of the material is prevented.

9.4.4 The contents of all the inner cartons remaining after separating out those required for microbiological tests (see 9.4.2), shall be individually tested for the uniformity ratio first (see 5.4.5). The prawns taken for the test shall be replaced and the contents of each inner carton shall be individually tested for odour, physical defects and the count where applicable.

10 METHODS OF TEST

10.1 Microbiological analysis

10.1.1 Take a sample of 250 g. Begin the examination as soon as possible after the sample is taken. Quick frozen samples should be stored in a deep freezer whenever the examination cannot be started within 1 h of sampling. Thaw the sample in its original container (or in the container in which it was received in the laboratory) in a refrigerator at 2 ^{o}C to 5 ^{o}C and examine as soon as possible after the thawing is completed or after sufficient thawing has occured to permit a suitable sub-sample to be taken.

10.1.2 Scrape-off surface water glaze from the material with a sterile scalpel and draw samples from different parts of the frozen material to make upto 50 g. Disintegrate the samples with 450 ml of dilution fluid in a sterile blender for two minutes to provide a dilution of 10^{-1}. Allow the mixture to stand for 15 minutes at room temperature to permit resucitation of the microorganisms. Mix the contents of the jar by shaking and prepare decimal dilutions aseptically.

10.1.3 After the preliminary preparation of the test samples as described in 10.1.1 and 10.1.2, proceed by the relevant test methods set out in Column 11 of Table 1.

10.2 Evaluation of odour

Thaw the sample as given in Appendix C and evaluate the raw odour of 100 prawns by breaking the prawns and by holding the broken flesh close to the nose immediately. Where the number of prawns available is insufficient, approximately 10 per cent by count of the prawns shall be taken for the test.

NOTE
Odour is evaluated prior to cooking. Cooked prawns shall not be recooked to evaluate the odour.

10.3 Uniformity ratio

10.3.1 Take all whole, unbroken, undamaged shrimp in a sample unit thawed according to Appendix C for this determination. If marked as "pieces", evaluation shall be of undamaged pieces.

10.3.2 Visually select and weigh 10 per cent by count of the largest prawns.

10.3.3 Visually select and weigh 10 per cent by count of the smallest prawns.

10.3.4 Divide the total mass of the large prawns from the total mass of the small prawns to obtain the uniformity ratio.

10.4 Appearance and physical defects

Examine 500 g of the thawed sample for appearance and physical defects defined in Appendix A and award scores for the occurance of defects as given in Tables 4 and 5.

Determine the total number of instances of all types of defects by adding together the number of instances of each defect.

A sample of 500 grams shall be considered defective if it contains more than 4 instances of defects.

NOTE

Tables 4 and 5 are applicable to a consignment in association with the sampling plan given in 9.3. It is not applicable to individual packs.

10.5 Count

10.5.1 *Method 1*

Determine the net mass of the block as described in Appendix D. Separate out pieces, broken or damaged prawns, improperly peeled prawns, and improperly deveined prawns and extraneous matter and deduct the total mass of this material from the net mass of the block. This is termed the adjusted mass of the block (m_0).

Count the number of prawns in the adjusted mass (x).

The count is calculated as follows :

$$\text{Count (per kilogram or pound)} = \frac{x}{m_0}$$

where,

m_0 is the adjusted mass, in kilograms or pounds of the blocks; and
x is the number of prawns in the adjusted mass.

10.5.2 *Method 2*

Take 450 g of the thawed sample and determine the number of whole prawns or shrimps in this portion. Express the count as the number of prawns or shrimps in a pound or kilogram as applicable.

11 CRITERIA FOR CONFORMITY

A lot shall be declared as conforming to the requirements of this specification if the following conditions are satisified:

11.1 Each inner carton or master carton inspected as in **9.4.1** satisfies the packaging and marking requirements.

11.2 The contents of each inner carton tested as in **9.4.2** satisfies the microbiological requirements.

11.3 The contents of each inner carton tested as in **9.4.3** satisfies the relevant requirement.

11.4 The number of inner cartons not conforming to the requirements for physical defects and count, where applicable, when inspected as in **9.4.4** is less than or equal to the corresponding acceptance number given in Column 3 of Table 2 or 3.

11.5 The value of the expression $x + 1.1s$ calculated using the test results of the uniformity ratio is not greater than the specified value when tested as in **9.4.4**.

APPENDIX A
DEFINITION OF PHYSICAL DEFECTS

For the purpose of this specification the definition of physical defects of shrimps or prawns shall be as follows :

A.1 DEHYDRATION

a) Prawn shell or meat containing whitish areas which affect its appearance, texture or palatability.

b) Prawns will be considered as dehydrated only if more than 20 per cent of the surface area shows signs of dehydration.

A.2 DISCOLOURATION

A prawn possessing an obvious unnatural appearance which affects its appearance, texture or palatability (see Notes).

NOTES

1) *Black discolouration should not be mistaken for natural black colour of prawns found in certain areas.*

2) *Natural black colour of the terminal segments and telson which is characteristic of tropical prawns is permitted.*

A.3 BLACK SPOT

a) Any black area that is readily apparent in the flesh of prawns which penetrates into the flesh. If a light scraping of the flesh surface will not remove it, it is considered as penetrating.
b) A prawn is deemed to have black spots which seriously affect its appearance, if more than 2 per cent of the surface area shows black spot formation.

A.4 HEADLESS

A prawn with the head (Cephalothorax) entirely detached.

A.5 PARTIALLY HEADLESS

A prawn having an incompletely detached head (part of the head removed).

A.6 CUT OR TORN/DAMAGED/PIECES

a) cut or torn : A prawn having a break in the meat greater than one third of the thickness of the prawn at the location of the cut or tear.
b) damaged : A prawn which is crushed or mutilated so as to seriously affect the appearance, but excluding a separation or severance of the shell segments in the 3/4 segment region.
c) piece : A portion of a prawn that contains less than four segments for counts greater than 150/kg (70/lb) and less than five segments for counts less than or equal to 150/kg (70/lb).

A.7 IMPROPERLY PEELED

A prawn which has shell or pieces of shell on the meat in excess of that warranted by the style.

A.8 INCOMPLETELY DEVEINED

a) Any black or dark vein that has not been removed.
b) A prawn will be considered as incompletely deveined if more than 20 per cent of any black or dark vein remains.

A.9 LEGS/LOOSE SHELL

a) legs : Walking legs either loose or attached to the prawns.
b) loose shell : Any piece of shell which is completely detached from the prawns.

A.10 EXTRANEOUS MATERIALS

Any material in a container which is not prawn material (see Note).

NOTE

Few specks of saw dust may be allowed.

A.11 Improperly cleaned ends

Ends with extraneous matter, discolouration or undesirable prawn material.

APPENDIX B
DEFINITION OF DECOMPOSITION CLASSES

B.1 CLASS 1 PASSABLE

This category includes prawns that range from very fresh to those that contain fishy odours characteristic of the commercial product, not definitely identifiable as decomposition.

B.2 CLASS 2 DECOMPOSED (SLIGHT BUT DEFINITE)

The first stage of definitely identifiable decomposition. An odour is present that, while not really intense, is perceptible and readily perceptible to the experienced examiner as that of decomposition.

B.3 CLASS 3 - DECOMPOSED (ADVANCED)

The product possesses a strong odour of decomposition which is persistent, distinct and unmistakable.

APPENDIX C
THAWING

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

If prawns 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 prawns until no hard core or ice crystals are felt.

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

APPENDIX D
DETERMINATION OF NET MASS

Open the package containing quick frozen prawns immediately after removal from low temperature storage and thaw according to Appendix E.

Weigh a dry clean sieve with woven wire cloth with nominal size of the square aperture 2.0 mm i.e. 2.80 mm sieve conforming to **CS 124.**

If the quantity of the total contents of the package is 500 g or less use a sieve with diameter of at least 200 mm.

If the quantity of the total contents of the package is more than 500 g use sieve with a diameter of at least 300 mm.

After all the glaze that can be seen or felt has been removed and the prawns separate easily, empty the contents of the cntainer on the previously weighed sieve. Incline the sieve at an angle of about 20 ^{o} and drain for two minutes.

Weigh out the sieve containing the drained product. Subtract the mass of the sieve, the resultant figure shall be considered to be the net mass of the package.

TABLE 4 -PERMISSIBLE NUMBER OF INSTANCES OF PHYSICAL DEFECTS
[(COUNTS LESS THAN 400/KG (200/LB)]

Sl. No.	Type of defect	Type applicable	Grade 1		Grade 2	
			one instance	additional instance	one instance	additional instance
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	dehydration/desiccation	All	5% by count	+ 3%	5% by count	+ 3%
ii)	discolouration (includes blackening, abnormal colouration)	All	5% by count	+ 3%	5% by count	+ 3%
iii)	Black spot (meat	All	8% by count	+ 4%	8% by count	+ 4%
	(shell	1, 2	12% by count	+ 6%	20% by count	+ 10%
iv)	Headless	1	5% by mass	+ 3%	5% by mass	+ 3%
v)	Partially headless	1	8% by mass	+ 4%	8% by mass	+ 4%
vi)	Cut, torn or damaged	1 to 8	9% by mass	+ 5%	9% by mass	+ 5%
vii)	Pieces	1 to 8	9% by mass	+ 5%	9% by mass	+ 5%
viii)	Heads, parts of heads	2	3% by mass	+ 2%	3% by mass	+ 2%
ix)	Soft shell	1, 2	10% by mass	+ 2%	not specified	-
x)	Improperly peeled	3 to 8	10% by mass	+ 2%	10% by mass	+ 2%
xi)	Improperly cleaned ends	2 to 8	10% by mass	+ 2%	10% by mass	+ 2%
xii)	Extraneous matter (not harmful)	All	2 by number	+ 1	2 by number	+ 1%
xiii)	Incompletely deveined	4,6,7,8	5% by mass	+ 3%	5% by mass	+ 3%
xv)	Legs, loose shell, antennae	3 to 8	5 by number	+ 3	5 by number	+ 3

TABLE 5 - PERMISSIBLE NUMBER OF INSTANCES OF PHYSICAL DEFECTS (COUNT MORE THAN 400/KG (200/LB)

Sl No.	Type of defect	Type applicable	Grade 1		Grade 2	
			one instance	additional instance	one instance	additional instance
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	dehydration/desiccation	All	5% by count	+ 3%	5% by count	+ 3%
ii)	Black spot (meat	All	3% by count	+ 4%	8% by count	+ 4%
	(shell	1, 2	12% by count	+ 6%	20% by count	+ 10%
iii)	Cut, torn or damaged	1 to 8	9% by mass	+ 5%	9% by count	+ 5%
iv)	Pieces	1 to 8	25% by mass	+ 10%	25% by mass	+ 10%
v)	Heads, parts of heads	2	3% by mass	+ 2%	3% by mass	+ 3%
vi)	Soft shell	1, 2	10% by mass	+ 2%	not specified	-
vii)	Legs and loose shell	3 to 8	20 by number	+ 5	20 by number	+ 5
viii)	Extraneous matter (not harmful)	All	2 by number	+ 1	2 by number	+ 1
ix)	Improperly peeled	3 to 8	5% by mass	+ 3%	5% by mass	+ 3%
x)	Incompletely deveined	4,6,7,8	5% by mass	+ 3%	5% by mass	+ 3%
xi)	Improperly cleaned ends	2 to 8	5% by mass	+ 3%	5% by mass	+ 3%

- Blank Page -

SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science & Technology.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in turn are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of standardization as are of special interest to Sri Lanka.

Printed at the Sri Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.

SLS CERTIFICATION MARK

The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI *which includes surveillance inspection of the factory, testing of both factory and market samples.*

Further particulars of the terms and conditions of the permit may be obtained from the Sri *Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*

Printed at SLSI (Printing Unit)