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Indian Standard

POULTRY PRODUCTS — PICKLED QUAIL EGGS — SPECIFICATION

भारतीय मानक

कुनकुट उत्पाद — बटेर के अण्डे का अचार — विशिष्टि

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AMENDMENT NO. 1 MARCH 2004 TO IS 12561: 1988 POULTRY PRODUCTS — PICKLED QUAIL EGGS — SPECIFICATION

(Page 1, clause 5.1.1) — Insert the following clause after 5.1.1

'5.1.2 Quality of water used for processing shall conform to IS 4251'

($\it Page 3, Annex \, A$) — Insert reference of the following Indian Standard at the appropriate place

IS No Title

4251: 1967 Quality tolerances for water for processed food industry

(FAD 18)

Reprography Unit, BIS, New Delhi, India

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards on 23 December 1988, after the draft finalized by the Meat Industry Sectional Committee, AFDC 18 had been approved by the Agricultural and Food Products Division Council.

Pickles occupy an important place among the traditional food processed in India. With the increasing populatity of quail (Coturnix coturnix japonica), there is a good scope for the utilisation of small and tinted quail eggs in the form of pickle. Technological details pertaining to the manufacture of pickled quail eggs have been worked out with a view to offer such nutritious, ready-to-eat product to the consumers. This standard is presently being formulated to ensure the production of pickled quail eggs of a quality that is acceptable to the consumer and feasible for manufacture.

While formulating this standard, due consideration has been given to the relevant Rules prescribed by the Government of India under the *Prevention of Food Adulteration Act*, 1954 and the Standards of Weights and Measures (Packaged Commodities) Rules, 1977. This standard is however, subject to the restrictions imposed under these Acts, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS: 2-1960 'Rules for rounding off numerical values (revised). The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

POULTRY PRODUCTS — PICKLED QUAIL EGGS — SPECIFICATION

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for pickled quail eggs.

2 REFERENCES

The Indian Standards given in Annex A are necessary adjuncts to this standard.

3 TERMINOLOGY

3.1 For the purpose of this standard, the following definition shall apply.

3.1.1 Pickled Quail Eggs

It is the product prepared under hygienic conditions from hard-boiled, sound and wholesome quail eggs using vinegar, acetic acid, common salt, edible vegetable oil and spices.

4 TYPES

Pickled quail eggs may be of the following two types:

Type 1 Vinegar-based egg pickle

Type 2 Oil-based egg pickle

5 REOUIREMENTS

5.1 Hygienic Requirements

The material shall be prepared and handled under strict hygienic conditions by persons free from contagious and infectious diseases and only in premises maintained in a thoroughly clean and hygienic conditions and having adequate and safe water supply (see IS 2491:1972), and duly approved and licenced by the public health authorities concerned. All workers shall use clean and washed clothings. Necessary precautions shall be taken to prevent incidental contamination of the product from soiled equipment or from personnel suffering from injuries.

5.1.1 All equipment coming in contact with raw materials or products in the course of manufacture shall be kept clean. An ample supply of steam and water, hoses, brushes and other equipment necessary for proper cleaning of machinery

and equipment shall be available. The equipment may be sterilized by immersion in or swabbing with hypochlorite solution or other suitable chlorine solution.

5.2 Raw Materials

5.2.1 Eggs

Only sound, wholesome quail eggs shall be used for the production of egg pickle.

5.2.2 Salt

Salt used shall conform to IS: 253-1985.

5.2.3 Vinegar

Distilled, white food grade vinegar shall be used.

5.2.4 Acetic Acid

Shall be food grade quality.

5.2.5 Vegetable Oil

Only pure, wholesome, edible vegetable oil conforming to relevant Indian Standard shall be used for frying of spices and condiments.

5.2.6 Other Ingredients

Spices and condiments shall be clean, sound, fit for human consumption and conforming to relevent Indian Standard.

5.3 Preparation

5.3.1 Type 1 Vinegar-Based Pickled Quail Eggs

For preparation of vinegar-based pickled quail eggs, the steps given in 5.3.1.1 to 5.3.1.5 shall be followed.

- **5.3.1.1** Fresh quail eggs shall be stored at ambient temperature for at least 24 hours prior to hard-cooking in water containing 2 percent (w/v) common salt, for about 10 min at simmering temperature.
- 5.3.1.2 After boiling, the eggs shall be cooled immediately in running tap water and peeled off manually. There shall be no pieces of egg shell or shell membrane adhering over the peeled eggs. Peeled eggs showing torn or rugged-looking albumen surface shall not be used for pickling.
- 5.3.1.3 Pickling solution shall consist of vinegar and water (50: 50 v/v), 8 percent (w/v)

common salt, and 2 percent (w/v) each spice mixture, onion (fresh and chopped), garlic and ginger. The solution shall be boiled for 10 minutes and then filtered using clean muslin cloth.

- 5.3.1.4 Pickling solution shall be heated to $70 \pm 2^{\circ}$ C and poured onto the peeled eggs. The average proportion of peeled eggs to pickle solution shall be in the ratio of 1:1.25 (w/v).
- 5.3.1.5 The pickled eggs shall be aged for 48 hours at ambient temperature in pre-sterilised glass container.

5.3.2 Type 2 Oil-Based Pickled Quail Eggs

For preparation of oil-based pickled quail eggs, the steps given in 5.3.2.1 to 5.3.2.3 shall be followed.

- **5.3.2.1** For preparation of oil-based pickled quail eggs, the pickle gravy shall be prepared by frying spices, condiments and common salt in edible vegetable oil in a suitable proportion.
- 5.3.2.2 Peeled eggs shall be fried in edible vegetable fat/oil to make their colour golden brown. Peeled eggs, gravy and acetic acid at the rate of 2 percent to the weight of peeled eggs shall be mixed.
- 5.3.2.3 The proportion of eggs to gravy shall be in the ratio of 70:30 with tolerance of ± 1 percent when tested according to the method prescribed in Annex B.
- 5.3.2.4 Pickeled eggs shall be aged for 48 hours in pre-sterilized glass containers.

5.4 Finished Product

- 5.4.1 The egg pickles shall possess a good uniform colour and appearance. It shall possess a good texture and normal characteristic taste and flavour typical of the type.
- 5.4.2 The product shall be free from pieces of egg shell, feathers, hairs, dirt, insects or any other extraneous matter.
- 5.4.3 The product shall not be unduly hard or rubbery and shall be devoid of any objectionable taste, smell or odour.
- 5.4.4 The egg pickles shall also conform to the requirements prescribed in Table 1.

6 PACKING AND MARKING

6.1 Packing

6.1.1 Packing in Flexible Pouches

After the aging period, the vinegar-pickled eggs shall be taken out from the glass containers and packed in high density polyethylene (see IS: 10146-1982), pouches of 300 gauge, without the pickle solution. Oil-based pickled eggs shall be packed in high density polyethylene (300 G) pouches along with pickle gravy.

6.1.2 Packing in Cases

The HDPE pouches shall be packed in suitable cases sufficiently strong to withstand rough handling during transit. The number of pouches in each case shall be subject to agreement between the purchaser and the packer.

Table 1 Requirements for Pickled Quail Eggs (Clause 5.4.4)

SI No.	Charactersitic	Requirements		Method of Test, Ref to	
		Type 1	Type 2	Annex of This Standard	Other Standard
(1)	(2)	(3)	(4)	(5)	(6)
i)	Acidity as percent acetic acid, Min	0-8	0.6	C	
ii)	Sodium chloride percent by mass, <i>Max</i>	3.0	3.0	-	IS : 5960 (Part 6)- 1971
iii)	pH of the pickeling solution	3.2	3.6		IS : 5558- 1970
iv)	Total plate count, per gram, Max	1 000	1 000	· ·	IS : 5402- 1969
v)	Coliform count, per gram	Nil	Nil		IS : 5401- 1969
vi)	Salmonella, per 0·1 g	Nil	Nil		IS: 5887 (Part 3)- 1976
vii)	Clostridia per 0·1 g	Nil	Nil	_	IS : 5887 (Part 4)- 1976

6.2 Marking

- 6.2.1 Each pouch shall be marked with the following particulars:
 - a) Name of the material alongwith brand name, if any;
 - b) Name and addres of the manufacturer:
 - c) Net mass of the contents;
 - d) Date of manufacture;
 - e) Batch or code number;
 - f) The ingredients used in decending order:
 - g) Warranty given by the manufacturer to be

not less than 6 calender months in case of vinegar-pickled quail eggs and not less than 4 calender months in case of oil-based quail egg pickle stored at an ambient temperature below 37°C and relative humidity 85 percent;

- h) Manufacturing licence number; and
- j) Other requirements as per the weights and measures (Packaged Commodities) Rules, 1977.

7 SAMPLING

7.1 Sampling of pickled quail eggs shall be done according to the method prescribed in Annex D.

ANNEX A

(Clause 2.1)

LIST OF THE REFERRED INDIAN STANDARDS

IS 253: 1985 Specification of edible common salt (third revision)

IS 323: 1959 Specification for rectified spirit (revised)

IS 460 (Part 1): 1985 Specification for test sieves: Part 1 Wire cloth test sieves (third revision)

IS 2491: 1972 Code for hygienic conditions for food processing (first revision)

IS 4905: 1968 Methods for random sampling

IS 5401: 1969 Methods for detection and estimation of coliform bacteria in foodstuffs

IS 5402: 1969 Method for plate count of bacteria in foodstuffs

IS 5558: 1970 Specification for chicken essence

IS 5887 (Part 3): 1976 Method for detection of bacteria responsible for food poisoining: Part 3 Isolation and identification of Salmonella and shigella (first revision)

IS 5887 (Part 4): 1976 Method for detection of bacteria responsible for foodpoisoining: Part 4 Isolation and identification of Clostridium welchil, Clostridium botulinum and Bacillus cereus (first revision)

IS 5960 (Part 6): 1971 Determination of ash:
Part 6 Determination of chloride

IS 10146: 1982 Specification for polyethylene for its safe use in contact with foodstuffs, pharmaceutical and drinking water

ANNEX B

(Clause 5.3.2.3)

DETERMINATION OF THE PROPORTION OF EGG TO GRAVY

B-1 PROCEDURE

B-1.1 Note down the weight of the pouch containing eggs (X). Open the pouch and drain over 16 mm IS Sieve [see IS: 460 (Part 1)-1985]. Wash the empty pouch with hot water and pour it over the eggs. Dry and weigh the empty pouch (Y) Pour hot water over the eggs three

or four times to remove all adhering condiments and oil. Ensure that the eggs are free from all adhering matter; if necessary, repeat washing with hot water. Allow the eggs to be completely drained of water. Place the eggs in the empty pouch and weigh (Z). The ratio of Z-Y: X-Z shall be 70:30.

ANNEX C

(Clause 5.4.4 and Table 1)

DETERMINATION OF ACIDITY

C-1 REAGENTS

C-1.1 Standard Sodium Hydroxide Solution — 0.1 N.

C-1.2 Phenoiphthalein Indicator Solution

Prepared by dissolving 0.1 g in 100 ml of rectified spirit (see IS: 323-1959).

C-2 PROCEDURE

C-2.1 Weigh accurately about 5 g of the egg material and blend it with 25 ml of distilled water in a waring blender to ensure uniform suspension. Transfer it into an Erlenmeyer flask. Rinse the bowl of the blender at least thrice with distilled

water and add to the suspension. Add one or two drops of phenolphthalein indicator solution and titrate with the standard sodium hydroxide solution. Note the volume of sodium hydroxide solution used.

C-3 CALCULATION

Acidity, as percent acetic acid = $\frac{0.006 \times V}{W} \times 100$

where

V = Volume of 0.1 N standard sodium hydroxide solution, and

W = Weight in g of the material.

ANNEX D

(Clause 7.1)

SAMPLING OF PICKLED OUAIL EGGS

D-1 GENERAL REOUIREMENTS

D-1.1 Sampling shall be done by a person agreed to between the purchaser and the vendor and in the presence of the purchaser (or his representative) and the vendor (or his representative).

D-1.2 Samples shall be stored in such a manner that the temperature of the material does not vary unduly from the normal temperature.

D-2 SCALE OF SAMPLING

D-2.1 Lot

In any consignment, all the cases containing pouches of the same size and from the same batch of manufacture shall be grouped together to constitute a lot.

D-2.1.1 Samples shall be tested from each lot for ascertaining conformity of the material to the requirements of this standard.

D-2.2 The number of pouches to be selected from the lot shall depend on the size of the lot and shall be as given in Table 2. In addition to this, 5 pouches shall be selected for testing for microbiological requirements.

Table 2 Number of Pouches to be Selected for Sampling

Lot Size	Sample Size
(1)	(2)
Up to 200	4
201 to 500	5
501 to 800	6
801 to 1 300	7
1 301 to 3 200	8
3 201 to 8 000	9
8 001 and above	10

D-2.3 These pouches shall be selected at random from a number of packing cases as agreed to between the purchaser and the vendor (or manufacture). Subject to such an agreement, the minimum number of packing cases to be opened may be in accordance with Table 3. The pouches required as in C-2.2 shall then be drawn at random equally from these packing cases.

Table 3 Opening of Packing Cases (Clause 2 3)

Number of Packing Cases in the lot	Number of Packing Cases to be Opened
(1)	(2)
Up to 10	2
11 to 25	4
26 to 64	5
65 to 100	6
101 to 150	7
151 to 225	8
226 to 300	9
301 to 50J	10

D-2.4 In order to ensure the randomness,

random number table (see IS: 4905-1968) shall be used. If such a table is not available, the following procedure shall be adopted.

Starting from any pouch, in a lot, count them as $1, 2, 3 \dots$ upto r in a systematic manner, where r is equal to the integral part of N/n, N being the total number of pouches in the lot, and n the number of pouches to be selected. Every rth pouch thus counted shall be separated until the requisite number of pouches is obtained from the lot to give samples for test.

D-3 CRITERIA FOR CONFORMITY

D-3.1 A lot shall be considered as conforming to the requirements of this standard if all the samples tested satisfy the corresponding requirements for the characteristics.

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