

2.3.38.D FROZEN SPINACH:

1. Frozen spinach shall be prepared from fresh, clean, sound edible parts of the spinach plant of the species *Spinacioleruceu*L.. Frozen spinach shall be sorted, washed sufficiently and drained to ensure adequate inactivation of enzymes and stability of colour and flavour. It shall be stored at -18°C or below. The product may contain salt, spices and herbs, sugars, edible fats and oils, sauces, milk solids and any other ingredients suitable to the product whose standards are prescribed under Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

2. The product shall be of a reasonably uniform green colour, characteristic of the variety. It shall be free from any foreign flavours and odours other than those imparted by any added ingredients. It shall be clean, sound and free from sand, grit and other foreign material. It shall also be free from fibrous material and for the styles of whole leaf and cut leaf not materially disintegrated due to mechanical damage. The product in pureed style shall be free from any dark particles or flower buds which affect the overall appearance of the product. It shall not contain any added colour.

3. The product may be presented in one of the following styles and shall be labelled accordingly:-

(i) **Whole spinach:** the intact spinach plant with root removed.

(ii) **Leaf spinach:** substantially whole leaves most of which are separated from the root crown

(iii) **Cut leaf spinach:** parts of leaves of spinach cut into pieces.

(iv) **Chopped spinach:** parts of leaves of spinach cut into small pieces but not comminuted to a pulp or puree.

(v) **Pureed spinach:** spinach finely divided or finely chopped or having passed through a sieve.

(vi) **Others:** any other presentation of the product shall be permitted provided that it is sufficiently distinctive from other forms of presentation laid down in this standard and is adequately described on the label to avoid confusing or misleading the consumer.

4. The product shall not exceed the tolerance for visual defect as given in Table below. The maximum number of each defects shall not exceed the tolerance indicated in column (3) (4) and (5) of the table 1 and column (3) and (4) of table 2. The combined total of all categories shall not exceed the limits indicated in S.No.8 of Table 1 for whole leaf and cut leaf style and S.No 6 of Table 2 for chopped style. The standard sample size shall be 300 gm for Table 1 and 100 gm for Table 2 and 3.

Table 1
Whole Leaf and Cut leaf Style

S.No	Defects	Total allowable numbers of defects for each Category (Maximum)

		Category 1 (Minor)	Category 2 (Major)	Category 3 (Serious)
(1)	(2)	(3)	(4)	(5)
1.	Loose leaves (Whole style only)(each leaf)	20	10	4
2.	Discolouration- Minor and Major			
3.	E.V.M- Minor and Major			
4.	Seed heads (each whole head)			
5.	Seed heads (each portion)			
6.	Crowns (exclusive of whole style)(each whole crown)			
7.	Root material (each piece)			
8.	Combined total Allowable number of defects(Maximum)	20		
9.	Mineral impurities, m/m	not more than 0.1 per cent.		
10.	Salt-free dry matter, m/m	not less than 5.5 per cent.		

Table 2
Chopped Style

S.No	Defects	Total allowable numbers of defects for each Category (Maximum)	
		Category 1 (Minor)	Category 2 (Major)
(1)	(2)	(3)	(4)
1.	Discolouration (each cm ²)- Minor and Major	20	10
2.	E.V.M (each 1 cm)- Minor and Major		
3.	Flower buds (each 50 pieces)		
4.	Crown material (each piece)		
5.	Root material (each piece)		
6.	Combined total Allowable number of defects (Maximum)	20	

7.	Mineral impurities, m/m	not more than 0.1 per cent.
8.	Salt-free dry matter, m/m	not less than 5.5 per cent.

Table 3
Pureed Style

S.No	Defects	Allowance
(1)	(2)	(3)
1.	Any dark particle or flower bud	Shall not affect the overall appearance of the product
2.	Mineral impurities, m/m	not more than 0.1 per cent.
3.	Salt-free dry matter, m/m	not less than 5.5 per cent.

Explanation:- for the purposes of this sub-regulation,-

(i) Loose leaves (Whole Style only).- Leaves which are detached from the crown.

(ii) Discoloration.-Discoloration of any kind on the leaves or stem portions and which materially detracts from the appearance of the product.

(a) Minor.-Discoloration which is light in colour.

(b) Major.-Discoloration which is dark in colour.

(iii) Extraneous Vegetable Matter.-Harmless vegetable material, such as grass, weeds and straw.

(a) Minor.-Extraneous vegetable matter which is green and tender.

(b) Major.-Extraneous vegetable matter which is other than green or is coarse.

(iv) Seed Heads (Flower Stems).-The flower bearing portion of the spinach plant, which is longer than 25 mm.

(v) Flower Buds.-The separate flower buds detached from the seed head.

(vi) Crown (Exclusive of Whole Style).-The solid area of the spinach plant between the root and the attached leaf clusters.

(vii) Root Material.-Any portion of the root, either loose or attached to leaves.]

2.3.39 Frozen Curried Vegetables/Ready-to-Eat Vegetables:

1. Frozen Curried Vegetables/Ready-to-Eat Vegetables means the product prepared from Fresh, Dehydrated or Frozen or previously processed vegetables, legumes, cereals or pulses,