

COMPARISON STANDARD OF ASPARAGUS

CODEX STANDARD FOR ASPARAGUS (CODEX STAN 225-2001)	UNECE standard FFV-04 Concerning the marketing and commercial quality control asparagus
<p>1. DEFINITION OF PRODUCE</p> <p>This standard applies to shoots of commercial varieties of asparagus grow form to the <i>Asparagus officinalis</i> L., of the <i>Liliaceae</i> family, to be supplied fresh to the consumer, after preparation and packaging. Asparagus for industrial processing is excluded.</p> <p>Asparagus shoots is classified into groups according to colour :</p> <ul style="list-style-type: none"> - white asparagus ; - violet asparagus, having tips of a colour between pink and violet or purple and part of the shoot white; - violet/green asparagus, part of which is of violet and green colouring; - green asparagus having tips and most of the shoot green. <p>This Standard does not apply to green and violet/green asparagus of less than 3 mm diameter and white and violet asparagus of less than 8 mm diameter, packed in uniform bundles or unit packages.</p>	<p>I. Definition of produce</p> <p>This standard applies to shoots of asparagus of the varieties (cultivars) grown from <i>Asparagus officinalis</i> L. to be supplied fresh to the consumer asparagus for industrial processing being excluded.</p> <p>Asparagus is classified into four groups according to colour :</p> <ul style="list-style-type: none"> ● White asparagus ● Violet asparagus, having tips of a colour between pink and violet or purple and a part of the shoot white ● Violet/green asparagus, part of which is of violet and green colouring ● Green asparagus having tips and most of the shoot green. <p>This standard does not apply to green and violet/green asparagus of less than 3 mm diameter and white and violet asparagus of less than 8 mm diameter, packed in uniform bundles or unit packages.</p>

<p style="text-align: center;">CODEX STANDARD FOR ASPARAGUS (CODEX STAN 225-2001)</p>	<p style="text-align: center;">UNECE standard FFV-04 Concerning the marketing and commercial quality control asparagus</p>
<ul style="list-style-type: none"> - practically free of pests affecting the general appearance of the produce; - practically free of damage caused by pests; - free of abnormal external moisture, excluding condensation following removal from cold storage; - free of any foreign smell and/or taste - fresh in appearance and fresh-smelling; - practically unbruised; - free of damage caused by unsuitable washing or soaking. <p>The cut at the base of the shoots must be as clean as possible.</p> <p>In addition, shoots must be neither hollow, split, peeled nor broken. Small cracks which have appeared after harvesting are, however, allowed, so long as they do not exceed the limits laid down in Section 4.1, Quality Tolerance.</p>	<ul style="list-style-type: none"> ● practically free from pests ● practically free from damage caused by pests ● free of abnormal external moisture, i.e. adequately “dried” if they have been washed or cooled with cold water ● free of any foreign smell and/or taste. ● practically unbruised <p>The cut at the base of the shoots must be as clean as possible.</p> <p>In addition, asparagus must be neither hollow, split, peeled nor broken. Small cracks which have appeared after harvesting are, however, allowed, so long as they do not exceed the limits laid down in Section IV.A “Quality Tolerances”.</p>
<p>2.1.1 The development and condition of the asparagus must be such as to enable it:</p> <ul style="list-style-type: none"> - to withstand transport and handing; and - to arrive in satisfactory condition at the place of destination. 	<p>The development and condition of the asparagus must be such as to enable them:</p> <ul style="list-style-type: none"> ● to withstand transportation and handling ● to arrive in satisfactory condition at the place of destination.

CODEX STANDARD FOR ASPARAGUS (CODEX STAN 225-2001)	UNECE standard FFV-04 Concerning the marketing and commercial quality control asparagus
<p>2.2 CLASSIFICATION</p> <p>Asparagus is classified in three classes defined below:</p> <p>2.2.1 “Extra” Class</p> <ul style="list-style-type: none"> - shoots in this class must be of superior quality, very well formed and practically straight. Having regard to the normal characteristics of the group to which they belong, their tips must be very compact. - Only a few very slight traces of rust caused by non-pathogenic agents on the shoot, removable by normal peeling by the consumer, are allowed. - For the white asparagus group, the tips and shoots must be white; only a faint pink tint is allowed on the shoots. - green asparagus must be green for at least 95% of the length. - No traces of woodiness are allowed for the shoots in this class. - The cut at the base of the shoots must be as square as possible. <p>However, to improve presentation when the asparagus is packed in bundles, those on the outside may be slightly beveled, so long as the beveling dose not exceed 1 cm.</p>	<p>B. Classification</p> <p>Asparagus is classified in three classes defined below:</p> <p>(i) “Extra” Class</p> <ul style="list-style-type: none"> - Asparagus in this class must be of superior quality, very well formed and practically straight. They must be characteristic of the variety and/or commercial type. Having regard to the normal characteristics of the group to which they belong, their tips must be very compact. - Only a few very slight traces of rust on the shoot, removable by normal peeling by the consumer, are allowed. - For the white asparagus group, the tips and shoots must be white; only a faint pink tint is allowed on the shoots. - Green asparagus must be totally green. - No traces of woodiness are allowed for the shoots in this class. - The cut at the base of the shoots must be as square as possible. <p>However, to improve presentation when the asparagus is packed in bundles, those on the outside may be slightly beveled, so long as the bevelling does not exceed 1 cm.</p> <ul style="list-style-type: none"> - They must be free from defects, with the exception of very slight superficial defects, provided that these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the packed.

<p style="text-align: center;">CODEX STANDARD FOR ASPARAGUS (CODEX STAN 225-2001)</p>	<p style="text-align: center;">UNECE standard FFV-04 Concerning the marketing and commercial quality control asparagus</p>
<p>2.2.2 Class I</p> <p>- Shoots in this class must be of good quality and well formed. They may be slightly curved. Having regard to the normal characteristics of the group to which they belong, their tips must be compact.</p> <p>- Green asparagus must be green for at least 80% of the length The cut at the base of the shoots must be as square as possible.</p> <p>- For the white asparagus group, a faint pink tint may appear on the tips and the shoots.</p> <p>- Slight traces of rust caused by non-pathogenic agents removable by normal peeling by the consumer are allowed.</p> <p>- In the white asparagus group, no woody shoots are allowed. For the other groups, a trace of woodiness on the lower part is permissible provided this woodiness disappears by normal peeling by the consumer.</p>	<p>(ii) Class I</p> <p>- Asparagus in this class must be of good quality. They must be characteristic of the variety and/or commercial type. Having regard to the normal characteristics of the group to which they belong, their tips must be compact.</p> <p>- Green asparagus must be least be green for 80 per cent of the length.</p> <p>- The cut at the base of the shoots must be as square as possible.</p> <p>- The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the packed:</p> <ul style="list-style-type: none"> ● a slight defect in shape, i.e. the shoots may be slightly curved ● a faint pink tint on the tips and the shoots of the white asparagus group ● slight traces of rust removable by normal peeling by the consumer ● a trace of woodiness on the lower part of the shoots of the violet, violet-green asparagus and green asparagus group, provided this woodiness disappears by normal peeling by the consumer.

<p style="text-align: center;">CODEX STANDARD FOR ASPARAGUS (CODEX STAN 225-2001)</p>	<p style="text-align: center;">UNECE standard FFV-04 Concerning the marketing and commercial quality control asparagus</p>
<p>2.2.3 Class II</p> <p>This class includes shoots which do not qualify for inclusion in the higher classes, but satisfy the minimum requirement specified in Section 2.1 above.</p> <ul style="list-style-type: none"> - compared with class I, shoots may be less well formed, more curved and having regard to the normal characteristics of the group to which they belong, their tips may be slightly open. - Traces of rust caused by non-pathogenic agents, removable by normal peeling by the consumer are allowed. - The tips of white asparagus may have a colouration including a green tint. - The tips of violet asparagus may have a slight green tint. - Green asparagus must at least be green for 60% of the length. - Shoots may be slightly woody. - The cut at the base of the shoots may be slightly oblique. 	<p>(iii) Class II</p> <p>This class includes asparagus that do not qualify for inclusion in the higher classes but satisfy the minimum requirement specified above. The following defects may be allowed, provided the asparagus retain their essential characteristics as regards the quality, the keeping quality and presentation:</p> <ul style="list-style-type: none"> - defects in shape; i.e. the shoots may be more curved than in class I and having regard to the normal characteristics of the group to which they belong, the tips may be slightly open <ul style="list-style-type: none"> ● traces of rust, removable by normal peeling by the consumer ● a green tint on the tips of white asparagus and a light green tint on the tips of violet asparagus ● Green asparagus must at least be green for 60 per cent of the length. ● Slight woodiness. ● The cut at the base of the shoots may be slightly oblique.

<p style="text-align: center;">CODEX STANDARD FOR ASPARAGUS (CODEX STAN 225-2001)</p>	<p style="text-align: center;">UNECE standard FFV-04 Concerning the marketing and commercial quality control asparagus</p>
<p>3. PROVISIONS CONCERNING SIZING</p> <p>Size is determined by the length and diameter of the shoot.</p> <p>3.1 SIZING BY LENGTH</p> <p>The length of the shoots must be:</p> <ul style="list-style-type: none"> - above 17 cm for long asparagus; - 12 to 17 cm for short asparagus; - for class II asparagus arranged, but not bundled in the package: <ul style="list-style-type: none"> (a) white and violet: 12 to 22 cm, (b) violet/green and green: 12 to 27 cm. - under 12 cm for asparagus tips. <p>The maximum length allowed for white and violet asparagus is 22 cm and for violet/green and green asparagus 27 cm.</p> <p>The maximum difference in length of shoots packed in firmly bound bundles must not exceed 5 cm.</p>	<p>III. Provisions concerning sizing</p> <p>Size is determined by the length and diameter of the shoot.</p> <p>A. Sizing by length</p> <p>The length of the shoots must be:</p> <ul style="list-style-type: none"> ● Above 17 cm for long asparagus ● 12 to 17 cm for short asparagus ● For class II asparagus arranged, but not bundled in the package: <ul style="list-style-type: none"> ● White and violet: 12 to 22 cm ● Violet/green and green: 12 to 27 cm ● Under 12 cm for asparagus tips. <p>The maximum length allowed for white and violet asparagus is 22 cm, and for violet/green and green asparagus 27 cm.</p> <p>To ensure uniformity in size, the range in length between shoots packed in firmly bound bundles shall not exceed 5 cm.</p>
<p>3.2 SIZING BY DIAMETER</p> <p>The diameter of the shoots shall be measured 2.5 cm from the cut end.</p> <p>The minimum diameter and sizing shall be:</p> <p>White and violet:</p>	<p>B. Sizing by diameter</p> <p>The diameter of shoots shall be measured at the mid-point of their length.</p> <p>White and violet asparagus:</p>

CORTEX STANDARD FOR ASPARAGUS
(CODEX STAN 225-2001)

Class	Minimum diameter	Sizing
Extra	12 mm	Maximum variation of 8 mm between the thinnest and the thickest shoot in the same package or the same bundle.
I	10 mm	Maximum variation of 10 mm between the thinnest and the thickest shoot in the same package or the same bundle.
II	8 mm	No provision as to uniformity.

Violet/ green asparagus:

Class	Minimum diameter	Sizing
Extra and I	3 mm	Maximum variation of 8 mm between the thinnest and the thickest shoot in the same package or the same bundle.
II	3 mm	No provision as to uniformity.

4. PROVISION CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the requirements of the class indicated.

UNECE standard FFV-04
concerning the marketing and commercial quality control of asparagus

Class	Minimum diameter	<i>The range in size between produce in the same package or bundle shall not exceed</i>
Extra	12 mm	Maximum variation of 8 mm between the thinnest and the thickest shoot in the same package or the same bundle.
I	10 mm	Maximum variation of 10 mm between the thinnest and the thickest shoot in the same package or the same bundle.
II	8 mm	No provision as to uniformity.

Violet/ green asparagus:

Class	Minimum diameter	<i>The range in size between produce in the same package or bundle shall not exceed</i>
Extra and I	3 mm	8 mm
II	3 mm	No provision as to uniformity.

IV. PROVISION concerning tolerances

At all marketing stages, tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated.

<p style="text-align: center;">CORTEX STANDARD FOR ASPARAGUS (CODEX STAN 225-2001)</p>	<p style="text-align: center;">UNECE standard FFV-04 concerning the marketing and commercial quality control of asparagus</p>
<p>4.1 QUALITY TOLERANCES</p> <p>4.1.1 “Extra” Class</p> <p>Five percent by number or weight of shoots not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class, or having slight unscarred cracks appearing after harvesting.</p>	<p>A. Qualities tolerances</p> <p>(i) “Extra Class”</p> <p>A total tolerance of 5 percent, by number or weight, of asparagus not satisfying the requirements of the class but meeting those of Class I or having alight unscarred cracks appearing after harvesting is allowed. Within this tolerance not more than 0.5 percent in total may consist of produce satisfying the requirements of Class II quality.</p>
<p>4.1.2 Class I</p> <p>Ten percent by number or weight of shoots not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class, or having slight unscarred cracks appearing after harvesting.</p>	<p>(ii) Class I</p> <p>A total tolerance of 10 percent, by number or weight, of asparagus not satisfying the requirements of the class but meeting those of Class II or having alight unscarred cracks appearing after harvesting is allowed. Within this tolerance not more than 1 percent in total may consist of produce satisfying neither the requirements of Class II quality nor the minimum requirements, or of produce affected by decay.</p>
<p>4.1.3 Class II</p> <p>Ten percent by number or weight of shoots satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.</p> <p>In addition to the above, 10% by number or weight can be allowed for</p>	<p>(ii) Class II</p> <p>A total tolerance of 10 percent, by number or weight, of asparagus satisfying neither the requirements of the class nor the minimum requirements is allowed. Within this tolerance not more than 2 percent in total may consist of produce affected by decay.</p> <p>In addition to the above, 10 percent, by number or weight, can be allowed</p>

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<p>hollow shoots or shoots showing very slight cracks due to washing. In no case can there be more than 15% hollow shoots in each package or bundle.</p>	<p>for hollow shoots or shoots showing very slight cracks due to washing. In no case can there be more than 15% hollow shoots in each package or bundle.</p>
<p>4.2 SIZE TOLERANCE</p> <p>For all classes, 10% by number or weight of shoots not corresponding to the size indicated and deviating from the specified limits with a maximum deviation of 1 cm in length.</p> <p>For all classes, 10% by number or weight of shoots not corresponding to the size indicated and deviating from the specified limits with a maximum deviation of 2 mm in diameter. In no case shall the diameter be less than 3 mm.</p>	<p>Size tolerances</p> <p>For all classes (if sized): a total tolerance of 10 percent, by number or weight, of asparagus not satisfying the requirements as regards sizing and deviating from the specified limits with a maximum deviation of 1 cm in length and 2 mm in diameter is allowed.</p>
<p>5. PROVISIONS CONCERNING PRESENTATION</p> <p>5.1 UNIFORMITY</p> <p>The contents of each package, each unit package or each bundle in the same package must be uniform and contain only asparagus of the same origin, quality, colour group and size (if sized).</p> <p>Nevertheless, with respect to colour, shoots of a different colour group may be allowed within the following limits:</p> <p>(a) white asparagus: 10% by number or weight of violet asparagus in Classes Extra and I and 15% in Class II;</p> <p>(b) violet, violet/ green and green asparagus: 10% by number or weight of</p>	<p>V. Provisions concerning presentation</p> <p>A. Uniformity</p> <p>The contents of each package or each bundle in the same package must be uniform and contain only asparagus of the same origin, quality, colour group and size (if sized)</p> <p>However, a mixture of asparagus of distinctly colours may be packed together in a package, provided they are uniform in quality and, for each colour concerned, in origin.</p> <p>The visible part of the contents of the package or bundle must be respective of the entire contents.</p>

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<p>asparagus of another colour group.</p> <p>In the case of Class II a mixture of white and violet asparagus is allowed provided it is appropriately marked.</p> <p>The visible part of the contents of the package, unit package or bundle must be representative of the entire contents.</p>	
<p>5.2 PACKAGING</p> <p>Asparagus must be packed in such a way as to protect the produce properly. The materials use inside the package must be new¹, clean, and of quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed, provided the printing or labeling has been done with non-toxic ink or glue.</p> <p>Packages must free of all foreign matter.</p> <p>Asparagus shall be packed in each container in compliance with the Recommended International Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CAC/RCP 44-1995).</p> <p>¹For the purposes of this Standard, this includes recycled material of food-grade quality.</p>	<p>Packaging</p> <p>Asparagus must be packed in such a way as to protect the produce properly.</p> <p>The materials use inside the package must be clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications, is allowed, provided the printing or labeling has been done with non-toxic ink or glue.</p> <p>Packages must be free of all foreign matter.</p>

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<p>5.3 PRESENTATION</p> <p>The asparagus may be presented under one of the following forms:</p> <p>(i) In bundle firmly bound.</p> <p>Shoots on the outside of each bundle must correspond in appearance and diameter with the average of the whole bundle.</p> <p>In “Extra” Class, asparagus shoots packed in bundles must be of the same length.</p> <p>Bundles must be arranged evenly in the package, each bundle may be protected by paper.</p> <p>In any one package, bundles must be of the same weight.</p> <p>(ii) Arranged, but not bundled in the package.</p> <p>(iii) In prepackaged units placed in another package.</p>	
<p>6. MARKING OR LABELLING</p> <p>6.1 CONSUMER PACKAGES</p> <p>In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply:</p> <p>6.1.1 Nature of Produce</p> <p>If the product is not visible from the outside, each package shall be labeled as to the name of the produce and may be labeled as to name of the variety.</p>	<p>VI. Provisions concerning marking</p> <p>Each package¹ must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:</p> <p>A. Identification</p> <p>Packer and/or dispatcher/shipper:</p> <p>Name and physical address (e.g. street/region/postal code and, if different from the country of origin, the country) or a code mark officially recognized by the national authority².</p>

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<p>6.2 NON-RETAIL CONTAINER</p> <p>Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside, or in the documents accompanying the shipment.</p> <p>6.2.1 Identification</p> <p>Name and Address of exporter, packer and/or dispatcher. Identification code (optional)².</p> <p>6.2.2 Nature of Produce</p> <p>“Asparagus” followed by the indication “white”, “violet”, “violet/green” or “green” if the contents of the package are not visible from the outside and, where appropriate, the indication “short” or “tips” or “mixture white and violet”.</p> <p>6.2.3 Origin of Produce</p> <p>Country of origin and, optionally, district where grown or national, regional or local place name</p>	<p>¹ These marking provision do not apply to sales packages presented in packages.</p> <p>2 The national legislation of a number of countries requires the explicit declaration of the name and address,. However, in the case where a code mark is used, the reference “packer and/or dispatcher (or. Equivalent abbreviations)” has to be indicated in close connection with the code mark, and the codemark should be preceded with the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.</p> <p>Nature of Produce</p> <ul style="list-style-type: none"> • “Asparagus” followed by the indication “white” ”, “violet”, “violet/green” or “green” if the contents of the package are not visible from the outside • “Short” or “tip” where appropriate • “Mixture of asparagus”, or equivalent denomination, in the case of a mixture of distinctly different colours of asparagus. If the produce is not visible from the outside, the colours and quantity of each in the package must be indicated. <p>C. Origin of produce</p> <ul style="list-style-type: none"> • Country of origin³ and, optionally, district where grown, or national, regional or local place name. • In case of a mixture of distinctly different colours of asparagus of different orgins, the indication of each country of origin shall appear next to

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<p>6.2.4 Commercial Identification</p> <ul style="list-style-type: none"> - Class; - Size expressed; <p>(a) for asparagus subject to the uniformity rules as minimum and maximum diameters,</p> <p>(b) for asparagus not subject not subject to the uniformity rules as minimum and maximum diameters or the words “and over”</p> <ul style="list-style-type: none"> - Number of bundles or number of unit packages, for asparagus packed in bundles or unit packages. <p>6.2.5 Official Inspection Mark (optional)</p> <p>²The national legislation of a number of countries requires the explicit declaration of the name and address.</p> <p>However, in the case where a code mark is used, the reference “packer and/or dispatcher (or equivalent abbreviations)” has to be indicated in close connection with the code mark.</p>	<p>the name of the colour concerned.</p> <p>D. Commercial specifications</p> <ul style="list-style-type: none"> • Class • Size expressed: <ul style="list-style-type: none"> • for asparagus subject to the uniformity rules as minimum and maximum diameters. • for asparagus not subject to the uniformity rules, as minimum diameter followed by bundles or the number of unit packages for asparagus packed in bundles or unit packages. <p>E. Official control mark (optional)</p> <p>The OECD Scheme for the Application of the International Standards for Fruit and Vegetables has published an explanatory illustrated brochure on the application of this standard. The publication may be obtained from the OECD bookshop at: www.oecdbookshop.org.</p> <p>equivalent abbreviations)” has to be indicated in close connection with the code mark, and the codemark should be preceded with the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.</p> <p>³The full or a commodity used name should be indicated.</p>

CORTEX STANDARD FOR ASPARAGUS (CODEX STAN 225-2001)	UNECE standard FFV-04 concerning the marketing and commercial quality control of asparagus
<p>7. CONTAMINANTS</p> <p>7.1 The produce cover by this Standard shall comply with the maximum levels of the Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995).</p> <p>7.2 The produce covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.</p>	
<p>8. HYGIENE</p> <p>8.1 It is recommended that the produce covered by the provisions of this Standard be prepared and handed in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969). Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.</p> <p>8.2 The produce should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).</p>	