

European Spice Association Quality Minima Document



About European Spice Association

The European Spice Association (ESA) is the umbrella organisation of the European spice industry. Members of ESA are the national federations of the Spice Industry in the member countries of the European Union, Switzerland and Turkey. Associated membership of ESA is also available to national or international associations or organizations representing exporters/traders at origin and processors, packers/traders or associations from European countries (other than the European Union) that are able to satisfy the membership requirement. ESA is also member of the International Organisation of Spice Trade Associations (IOSTA).

Scope of the Document

This document describes the quality minima for dried herbs and spices, which should be demanded by buyers when these products are purchased for further processing within the EU.

Purpose of the ESA Quality Minima Document

The purpose of this document is to ensure that herbs and spices, as agricultural commodities, have been grown, harvested and further treated to ensure that the products meet the requirements of this quality minima document. To achieve this objective ESA supports the principles of Good Agricultural Practice (GAP) and Good Manufacturing Practice (GMP). These principles serve all parties involved in the supply chain as they focus on prevention and control rather than reconditioning which is not always technologically possible. The harvest, cultivation, transport and post-harvest conditions should ensure the material is stored and handled in such a way as to prevent adulteration, contamination and the growth of micro-organisms.

CHEMICAL/ PHYSICAL ANALYSIS	
Ash	For values see appendix I; for analysis see appendix II
Acid Insoluble Ash	For values see appendix I; for analysis see appendix II
Moisture	For values see appendix I; for analysis see appendix II
Volatile Oil	For values see appendix I; for analysis see appendix II
Water Activity	Water activity is a key parameter that affects microbiological growth. Therefore ESA recommends a target value of max. 0.65.
Bulk Density	Due to methodology variability both method and value should be agreed between buyer and seller.
Microbiology	The product shall be free from microorganisms at such levels which may represent a hazard to health. If the product is treated to reduce microbial loads before being imported into destination country the treatment will be such as to render/ensure the microbiological safety of consumers. Specific requirements to be agreed between buyer and seller.
CONTAMINANTS/ RESIDUES	
Pesticides	Shall be utilized in accordance with good agricultural practice. Application and residue limits must comply with existing EU and/or national legislation.
Heavy Metals	Must comply with national / EU legislation (e.g. cadmium, lead).
Mycotoxins	Herbs and spices must be grown, harvested, handled and stored in such a manner as to prevent the occurrence of mycotoxins. If found, levels must comply with existing national and / or EU legislation.
Allergens	Refer to ESA Position Statement
Treatments	Only legally permitted processing procedures may be applied in any treatment used for product quality or safety. EC approved fumigants may be used in accordance with manufacturer’s instructions but this must be indicated on the accompanying documents. Ethylene oxide (ETO) treatment has been banned under European legislation. This ban covers both materials with treated within and outside of the EU (i.e. the use of material that has been ETO treated before importation is also illegal). Irradiation, at present, does not have full consumer acceptability, so the treatment has to be agreed between buyer and seller. If it is agreed irradiation is only permitted in EU approved irradiation plants. However EU legislation requires that the irradiated product is declared at all levels within the food chain.

PURITY	
Botanical Species	In compliance with Food Law Regulations. If not regulated. ESA list of Culinary Herbs and Spices, or to be agreed between buyer and seller.
Adulteration	Must be free from.
Infestation	Should be free in practical terms from live and/or dead insects, insect fragments and rodent contamination visible to the naked eye (corrected if necessary for abnormal vision).
Extraneous matter	Herbs max. 2%, Spices max. 1% by weight
Foreign Matter	The European food operator has to evaluate if products fully comply with safety requirements before selling them to the final consumer. If not, additional processing will be necessary.
SENSORY PROPERTIES	Must be free from off odour or off flavor.
PACKAGING	The packaging must not be a source of contamination or migration, should be food grade and must protect the product quality during transportation and storage.

Appendix I Chemical / physical parameters; dry base for ASH, AIA, V/O

PRODUCT¹⁾	ASH % W/W MAX *	AIA % W/W MAX *	H₂O % W/W MAX *	V/O ml/100g MIN *
Anise	9.0	2.5	12	1.0
Basil	16	2.0	12	0.5
Caraway	8.0	1.5	13	2.5
Cardamom	9.0	2.5	12	4.0
Celery seed	12	3.0	11	1.5
Celery leaves	20	1.0	8.0	Traces**
Chervil	17	2.0	8.0	Traces**
Chilli	10	1.6	11	-
Chives	13	2.0	8.0	Traces**



Cinnamon	7.0	2.0	14	0.7 – 1.0 (ISO 6539 ISO 6538) Depending on botanical species
Cloves	7.0	0.5	12	14
Coriander seed Microcarpum Macrocarpum	7.0	1.5	12	0.6 Traces**
Coriander leaves	15	1.0	8.0	Traces**
Cumin	14	3.0	13	1.5
Dill seed	10	2.5	12	1.0
Dill tops	15	2.0	8.0	Traces**
Fennel	10	2.0	12	1.5
Fenugreek	7.0	1.5	11	Traces**
Galangal (ground)	9.0	4.0	10	Traces**
Garlic products	6.0	0.5	6.5	-
Ginger	8.0	2.0	12	1.5
Juniper berries	5.0	1.0	16	1.4
Laurel leaves	7.0	2.0	8.0	1.0
Lemon grass	8.0	2.5	10	Traces**
Mace	4.0	0.5	10	5.0
Marjoram	10	2.0	12	0.7
Mustard	6.5	1.0	10	-
Nutmeg	3.0	0.5	10	5 - 6.5 Depending on grade
Onion products (Allium cepa)	5.0	0.5	6.0 - 8.0 (depending on origin)	-
Oregano	10	2.0	12	1.5
Paprika powder	10	2.0	11	-
Parsley	14	1.5	7.5	Traces**
Pepper black	7.0	1.5	12	2.0
Pepper white	3.5	0.3	12	1.5

Pepper Green (Dried)	3.0	0.3	13*	1.0
Pimento				
Jamaica	4,5	0.4	12	3.0
Other Origins	5.0	1.0	12	2.0
Pink pepper (<i>schinus</i>)	7.0	1.8	14*	2.0
Poppy seeds	8	1	8	n.a.
Rosemary	8.0	1.0	10	1.0
Saffron whole	8.0	1.0	12	-
Saffron ground	8.0	1.5	10	-
Sage	12	2.0	12	1.5
Savoury - Mountain type (wild grown)	12	1.0	12	0.5
Savoury – Garden type (cultivated)	12	4	12	1.5
Spearmint	12	2.5	13	0.5
Star anise	3.0	0.5	8.0	7.0
Tarragon	12	1.5	8.0	0.5
Thyme	12	3.5	12	1.0
Turmeric whole	8.0	2.0	12	2.5
Turmeric ground	9.0	2.5	10	1.5

Appendix II Recommended analytical methods

Unless otherwise agreed between buyer and seller, ESA recommends the following methods:

1. Spices and condiments – Sampling EN ISO 948 – 2009
2. Spices and condiments – Preparation of a ground sample for analysis ISO 2825 – 1981
3. Spices and condiments – Determination of extraneous matter and foreign matter content ISO 927 – 2009
4. Spices and condiments – Determination of total ash ISO 928 – 1997
5. Spices and condiments – Determination of acid insoluble ash ISO 930 – 1997
6. Spices and condiments – Determination of moisture content – (Entrainment method) ISO 939 - 1980
7. Spices and condiments – Determination of volatile oil EN ISO 6571 2009
8. Analysis of spices and condiments – Determination of loss in mass of capsicum and allium species and of dried vegetables by vacuum oven drying – DIN 10236 (German standard)

These methods are available at the national standardization bodies or at www.iso.org



Appendix III Other documents for information

To help suppliers meet the requirements of the ESA quality minima the following documents may be beneficial:

1. Code of hygienic practice for spices and dried aromatic plants CAC/RCP 42 – 1995, Codex Alimentarius Commission
2. Manual on the Packaging of dried herbs and spices – prepared by the International Trade Centre, ITC, Geneva 1999, ISBN 92-9137-114-9
3. With respect to cleaning and reconditioning, ESA supports the principles of Section 8 “Cleaning and Reconditioning” of the Clean Spices Booklet issued by ASTA, October 2000
4. Guidelines for the application of the Hazard Analysis Critical Control point (HACCP) system Alinorm 93/13 A App. II Codex Alimentarius

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