

**STANDARD FOR HANDLING, PROCESSING, PACKAGING AND
MARKETING OF AGRI-FOOD PRODUCTS
IOS – Italian Organic Standards**

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Foreword

The aim of all the activities connected with the handling and processing of products from organic farming is to put foodstuffs having high organoleptic and nutritional qualities at the customers' disposal and to enable producers to market their products without compromising their integrity.

The fresh and processed products from organic farming intended for human consumption shall be obtained fully complying with the following guidelines.

Contamination of organic product by GMOs that results from circumstances beyond the control of the operator alters the organic status of the operation and/or product.

Operator is obliged to respect what written below:

- here below a we list minimum principle that an organic operator should consider within his/her relationship with any member of the firm team;
- all workers must have equal opportunities in terms of working hours, wages, union chances and any other condition;
- working conditions should not damage physically or psychically operators and workers;
- there should be no constrictions of any kind towards workers;
- children should have access to educational opportunities;
- wages must be agreed with workers and should not be discriminatory;
- each firm/farm should develop a social policy that integrates national or international laws concerning social issues;
- to any producer should be recognised a fair price;
- production based on violations of human rights may not be certified as organic;
- organic products may not be produced using forced or involuntary labour.

1 General requirements

- 1.1 Concerning hygiene and food safety, protection of public welfare, requirements of ethical and social responsibility, and safety at the workplace, provisions of the law subjected to public supervision and control have to be considered sufficient, if are present and applied in equivalence with law standards of European Community.
- 1.2 In any case, particular attention must be dedicated in order that contaminations, between organic and conventional productions made in the same processing unit, will not happen.
- 1.3 When applying for admission to the organic production system, the processing and packaging units shall submit to the Certification Body a Notification of Production accompanied by general data concerning their activity:
 - Identification and description of production unit(s), production flows and equipment used at every stage of the production process (storage and marketing included);
 - Description of precautionary measures to be adopted to ensure the application and observance of these guidelines, and in particular measures to assure separation between organic and conventional production cycles.
- 1.4 Processing and packaging units shall adopt techniques ensuring not only the high quality of products, but also their safety and integrity. All operations shall comply with Good Hygiene Practices (Codex, GMP, HACCP) and the current regulations concerning the hygiene of foodstuffs.

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- 1.5 Processing and packaging units shall identify all sources which may potentially lead to the contamination of processed products and put in place adequate monitoring and control measures, including a cleaning and sanitizing plan for facilities, equipment and utensils used and a pest management plan as well.
- 1.6 Organic foodstuffs shall be high-quality, safe and free from residues of substances used for cleaning, disinfecting and sanitizing the food processing facilities.
- 1.7 Organic processed products shall be obtained exclusively from raw materials of agricultural origin complying with these Standards and/or certified to IFOAM accredited Standards.
- 1.8 The use of additives or processing aids is allowed only for the purpose of preserving the quality and the nutritional value of products, helping the processing operations and guaranteeing the safety of products.
- 1.9 Processing and packaging units shall maintain an effective recordkeeping system.

2 Requisites of facilities, plants and equipment

- 2.1 Processing and packaging units shall comply with the statutory regulations concerning foodstuffs hygiene and workers' health and safety and adopt social accountability systems as well.
- 2.2 Where necessary, the processing and packaging units shall adopt adequate procedures for storing, treating and managing effluents in compliance with regulations concerning pollution prevention, and adequate record-keeping systems as well.
- 2.3 Buildings, equipment and installations shall be maintained and managed in such a way as to protect them from contamination and/or deterioration.
- 2.4 Installations and equipment coming into contact with food shall be provided with technological and material solutions meeting current regulations and shall be so designed as to facilitate maintenance and cleaning, thus preventing food contamination.

3 Raw materials and ingredients

- 3.1 The ingredients used for the production of organic foodstuffs shall be of organic origin, with the exception of additives, processing aids and ingredients of non-organic origin listed in the Annexes.
- 3.2 Water and salt may be used as ingredients and are not included in the calculation of the percentage of organic ingredients.
- 3.3 All enzymes, yeasts and starter cultures used in the production process, as well as other products of microbial origin, shall be obtained on substratum of organic origin and grown on substrates consisting of organic ingredients and substances included in the Annexes, where available (IFOAM).
- 3.4 The use of ingredients or processing aids consisting of, containing and/or derived from GMOs is prohibited.
Inputs, processing aids and ingredients shall be traced back one step in the biological chain to the direct source organism from which they are produced to verify that they are not derived from GMOs.
- 3.5 Only the additives and processing aids included in the Annexes are permitted.
- 3.6 The use of minerals, vitamins and other similar isolated ingredients is allowed only where it is legally required or necessary to counteract severe nutritional or dietary deficiency and/or food allergy.

4 Processing operations management

4.1 Management requirements

- 4.1.1 It's allowed that in the same unit may handle and process non-organic products on condition that:

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- a) separated or clearly distinct premises or areas, provided with adequate identification, are available for the storage of organically-produced raw materials, semi-finished or finished products;
- b) the processing of organic products is performed in a single run separated in time and/or space from operations performed on non-organic products, and adequate measures are taken to avoid the contamination of organic products;
- c) organic products are clearly identified all the way through the production process, so as to prevent contact and co-mingling with non-organic products;
- d) the products are packaged, labelled and adequately segregated, if both organic and non-organic products are to be transported together during the marketing stage;
- e) the Certification Body is notified of the date of beginning of processing operations, with no delay and in any case before such processing operations start.

4.2 *Processing and storage*

4.2.1 Processing and packaging activities shall comply with the legal provisions concerning the hygiene of food production and the specific regulations related to the productions in question.

4.2.2 Organic food shall be produced by means of processing technologies and procedures based on biological, physical and mechanical methods and in a way which maintains the qualities of each ingredient and of the finished product. Filtration equipment shall not contain asbestos, or utilise techniques or substances that may negatively affect the product.

Filtration techniques that chemically react with or modify organic food on a molecular basis shall be restricted.

All physical treatments which allow fining (like centrifugation, filtration and so on) are allowed.

The use of the following clarification adjuvants is permitted: potassium caseinate, bentonite, jelly in flakes or powder, silicium oxides, egg albumin and isinglass.

The use of the following products are forbidden: Insoluble Polyvinyl-poly-pyrrolidone (PVPP), defibrinated blood in powder, animal or vegetal charcoal.

4.2.3 Technological and food safety techniques shall be such as to maintain as much as possible the nutritional value and sensorial characteristics in processed products.

4.2.4 Any additives, processing aids, or any other substances which may react, or modify organic foodstuffs, shall comply with the requirements laid down in this Standard and in the specific Annex.

4.2.5 For the extraction process, only solvents such as water, ethanol, plant and animal oils, vinegar, carbon dioxide and nitrogen, shall be used.

4.2.6 Irradiation is prohibited.

4.2.7 The following preservation procedures are allowed:

- a. temperature control
- b. cooking, pasteurization, sterilization by heat;
- c. drying;
- d. salting;
- e. smoking;
- f. use of oils and fats; use of sugars; use of vinegar;
- g. use of lactic acid;
- h. use of sulphur dioxide and derivatives therefrom (for wine only)
- i. controlled and modified atmosphere (CO₂, O₂, O₃, N₂);
- j. heat and vacuum concentration; cryoconcentration;
- k. membrane concentration; vacuum creation;
- l. UV-light

4.2.8 The following storage conditions are allowed:

- a. Controlled atmosphere
- b. Temperature control
- c. Humidity and ventilation regulation

4.2.9 The use of ethylene for ripening of bananas is the only allowed.

5 Packaging

- 5.1 The packaging of organic foodstuffs shall have a minimum impact on products and environment.
- 5.2 Where possible, unnecessary packaging materials and procedures shall be avoided.
- 5.3 All materials and procedures permitted by the legislation in force may be used for the packaging of organic products. Containers and packaging materials shall be new and/or clean and free from pollutants.
- 5.4 The use of re-usable, re-cyclable, re-cycled and biodegradable materials is recommended. Re-usable containers shall be made of non-absorbing materials and maintained in good conditions, clean and free from any undesired residue or contamination.
- 5.5 Packaging materials shall not adversely affect the sensorial characteristics of products or transfer substances to them which may compromise their integrity or pose hazards to consumers' health.
- 5.6 Packaging materials, containers or crates containing synthetic fungicides, preservatives or fumigants are prohibited.
- 5.7 The materials used for packaging shall be appropriately stored and protected from any contamination source. They shall be stored in a dry clean place periodically monitored for pests.

6 Record-keeping and traceability

- 6.1 The processing unit shall comply with the requirements of current regulations concerning the identification and traceability of foodstuffs.
- 6.2 The processing unit shall put in place and maintain a record-keeping system enabling the operator to record all the data concerning raw materials, processing activities and finished products, and in particular:
 - a) the origin, type and quantity of the ingredients, additives and processing aids received by the unit;
 - b) the composition of processed products;
 - c) the origin, type and quantity of agricultural crop products from organic farming received by the unit;
 - d) the type, quantity and consignees of products obtained in compliance with this Standard.

7 Pest control

- 7.1 Organic food shall be protected from pests through structural and mechanical measures and through the application of good practices including cleaning and sanitizing and excluding chemical treatments or irradiation.
- 7.2 The processing and packaging unit shall develop a pest management plan documenting the techniques and procedures adopted, the monitoring action undertaken and the records kept (date of intervention or installation, quantities, products, etc.), also complying with the legislation in force.
- 7.3 The following pest control methods shall be used (in order of priority):
 - a. preventive methods (e.g.: disruption, elimination of habitat and access to facilities),
 - b. mechanical, physical and biological methods,
 - c. substances included in Annex II to IFOAM ACCREDITED ITALY Agricultural Crop Production Standard,
 - d. pheromone traps or capture-traps.

Direct control with active substances shall be considered as the last resort.

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- 7.4 The use of physical barriers, sound, ultrasound, UV-light and traps (hormone traps and bait traps included) whose action is based on exclusion criteria, temperature control, controlled atmosphere, fumigation and diatomaceous earth, is recommended.
- 7.5 Spraying with the active substances listed in Annex II to IFOAM ACCREDITED ITALY Agricultural Crop Production Standard (pest-control products) is permitted, on condition that the commercial formulations are specifically registered for insect post-harvest control. In any case, before any intervention, it is necessary to verify whether insects or other animals are present, through chromatic, light, pheromone or bait traps.
- 7.6 It is prohibited:
- a. to use pesticides not included in Annex II to IFOAM ACCREDITED ITALY Agricultural Crop Production Standard,
 - b. to fumigate using ethylene oxide, methylbromide, aluminium phosphate, or other substances not included in Annex II to IFOAM ACCREDITED ITALY Agricultural Crop Production Standard,
 - c. to apply ionizing radiation.
- 7.7 If rodent traps containing prohibited substances are used, such substances shall not come into contact with organic products. The traps shall be positioned in a way that no contamination hazards are posed to organic products. The direct use of a prohibited substance or the application of a prohibited method or material will make the products not eligible for certification.
- 7.8 The application of prohibited substances to buildings or equipment does not compromise the organic status of the products processed or handled there. In this case, however, the operator shall take appropriate precautions to prevent product contamination, including the removal of products from processing or storage premises before treatments are applied, and the adoption of adequate measures for the decontamination of premises and equipment treated.
- 7.9 Any substance used for pest control shall be provided with an appropriate label and placed in a separate room or cabinet excluding any possibility of contact with organic products.

8 Sanitation and hygiene

- 8.1 Buildings, plants and equipment shall be so designed as to prevent the contamination of organic products during cleaning and sanitizing.
- 8.2 The processing and packaging units shall develop a cleaning and sanitizing management plan aimed at preventing the contamination of food and contact surfaces by prohibited substances, non-organic ingredients, pests, pathogens and foreign materials. Such plan shall document the techniques and procedures adopted, the monitoring activity performed and the records kept.
- 8.3 Physical and mechanical means, such as dry heat, humid heat, exclusion measures and other non-chemical methods, are recommended in order to prevent microbial contamination. Only water and the substances meeting the requirements under point 9.5 of this Standard are permitted for cleaning and sanitizing.
- 8.4 The cleaning and sanitizing of production areas, plants and equipment shall combine maximum hygiene and minimum environmental impact.
- 8.5 Detergents, disinfectants and sanitizing agents legally approved for use in food industry may be used. However, appropriate procedures shall be adopted, ensuring that no residues remain on contact surfaces. The use of persistent and/or carcinogenic detergents, disinfectants and sanitizing agents is prohibited.

9 Labelling

- 9.1 An agricultural product and foodstuff may be marketed with “IFOAM Accredited” Mark only if:
- a. it has been obtained in compliance with this Standard (or other equivalent ones);

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- b. at least 95% of ingredients of agricultural origin (water and salt are not calculated) comply with the requirements of IFOAM Accredited Italy Standards (or other equivalent ones);
 - c. all the other ingredients of agricultural origin are included in the Annex to this Standard;
 - d. the product contains only the substances listed in the Annex as ingredients of non-agricultural origin;
 - e. the product or its ingredients have not been subjected to treatments not permitted by this Standard;
 - f. the product or its ingredients have not been subjected to treatments involving ionizing radiation;
 - g. genetically modified micro-organisms or preparations based on genetically modified micro-organisms, within the meaning of Directive 90/220/EEC, have not been used;
 - h. the raw material (ingredient) “from organic farming” has not been mixed with the same substance of conventional type.
- 9.2 When labelling the products from organic farming, it is necessary to observe all the legislative provisions governing the labelling of foodstuffs (Legislative Decree No. 109 of 27 January 1992 implementing the Directive 89/396/EEC concerning the labelling, presentation and advertising of foodstuffs).
- 9.4 It is not possible to display “GMO-free” indications in the labels.
- 9.5 The labels shall display the business name of the operator under the inspection system who is responsible for the marketing of the products.
- 9.6 All ingredients of a multi-ingredient product must be listed on the product label in order of their weight percentage. It must be apparent which ingredients are of organic certified origin and which are not. All additives must be listed with their full name. If herbs and /or spices constitute less than 2% of the total weight of the product, they can be listed as “spices” and “herbs” without stating the percentage.

ANNEX I

A - Permitted additives and processing aids

Name	Product	Description Additive = A Processing aid = P.A.	Conditions for use Restrictions/Notes
E 170	Calcium carbonate	A / P.A.	
E 181	Tannin	P.A.	May only be used for wine
E 184	Tannic acid	P.A.	Wine filtration aid
E 220	Sulphur dioxide	A	May only be used for wine
E 224	Potassium metabisulphite	A	May only be used for wine
E 270	Lactic acid	A / P.A.	
E 290	Carbon dioxide	A / P.A.	
E 296	L-Malic acid	A / P.A.	
E 300	Ascorbic acid	A	
E 306	Tocopheroles, mixed natural concentrates	A	Antioxidant in fats and oils
E 322	Lecithin	A / P.A.	
E 330	Citric acid	A / P.A.	
E 333	Calcium citrate	A	
E 334	Tartaric acid	A / P.A.	May only be used for wine
E 335	Sodium tartrate	A / P.A.	
E 336	Potassium tartrate	A / P.A.	
E 341	Monocalcium phosphate	A	Raising agent for self-raising flour
E 342	Ammonium phosphate	A	Restricted to 0.3 g/l in wine
E 400	Alginic acid	A	

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E 401	Sodium alginate	A	
E 402	Potassium alginate	A	
E 406	Agar	A	
E 407	Carragenean	A	
E 410	Locust bean gum	A	
E 412	Guar gum	A	
E 413	Tragacanth gum	A	
E 414	Arabic gum	A	May only be used for milk products, fat products, eggs, sweets and confectionery
E 415	Xanthan gum	A	May only be used for fat products, fruit and vegetables products, cakes and biscuits
E 440	Pectin	A	Unmodified
E 500	Sodium carbonate	A / P.A.	
E 501	Potassium carbonate	A / P.A.	
E 503	Ammonium carbonate	A	May only be used for cereal products, jams, cakes and biscuits
E 504	Magnesium carbonate	A	May only be used for wine
E 508	Potassium chloride	A	
E 509	Calcium chloride	A / P.A.	
E 511	Magnesium chloride	A / P.A.	May only be used for soybean products
E 513	Sulphuric acid	P.A.	Modification of pH in sugar production
E 516	Calcium sulphate	A	May only be used for soybean products, confectionery and baking yeasts
E 517	Ammonium sulphate	A	May only be used for wine, restricted to 0.3g/l
E 524	Sodium hydroxide	A / P.A.	May only be used in sugar production and for the surface treatment of bakery products
E 526	Calcium hydroxide	A / P.A.	May only be used as a food additive for maize tortilla flour
E 551	Silicon dioxide (amorphous)	P.A.	May only be used for wine, fruit and vegetables processing
E 553	Talc	P.A.	
E 901	Beeswax	P.A.	
E 903	Carnauba wax	P.A.	
E 938	Argon	A	
E 941	Nitrogen	A / P.A.	
E 948	Oxygen	A / P.A.	
	Activated carbon	P.A.	
	Bentonite	P.A.	May only be used for fruit and vegetables
	Casein	P.A.	May only be used for wine
	Diatomaceous earth	P.A.	May only be used for confectionery and wine
	Egg white albumen	P.A.	May only be used for wine
	Ethanol	P.A.	Solvent
	Gelatin	P.A.	May only be used for wine, fruit and vegetables
	Isinglass	P.A.	May only be used for wine
	Kaolin	P.A.	
	Perlite	P.A.	
	Preparations of bark	P.A.	May only be used in sugar production

B - Flavourings

- Substances and products as defined in Article 1 (2)(b)(i) and 1 (2)(c) of Directive 88/388/EEC labelled as natural flavouring substances or natural flavouring preparations, according to Article 9 (1)(d) and (2) of that Directive, including volatile (essential) oils produced by means of solvents such as oil, water, ethanol, carbon dioxide and by mechanical and physical processes.
- Natural smoke flavourings.

C - Water and salts

- Drinking water
- Salt (with sodium chloride or potassium chloride as basic components) normally used in food processing.

D - Preparations of micro-organisms for use in food processing

Any preparations of micro-organisms normally used in food processing, with the exception of organisms genetically modified within the meaning of art.2 (2) of Directive 90/220/EEC.

E - Minerals (trace elements included), vitamins, aminoacids and other nitrogen compounds

Minerals (trace elements included), vitamins, aminoacids and other nitrogen compounds are only authorized as far as their use is legally required in the foodstuffs in which they are incorporated.

F - Ingredients of agricultural origin which have not been produced organically

Unprocessed vegetable products and products derived therefrom by processes permitted by this Standard.

F.1 Edible fruits, nuts and seeds:

- | | |
|------------------------|--------------------------|
| – Acorns | <i>Quercus spp</i> |
| – Cola nuts | <i>Cola acuminata</i> |
| – Gooseberries | <i>Ribes crispa</i> |
| – Passion fruit | <i>Passiflora edulis</i> |
| – Raspberries (dried) | <i>Rubus idaeus</i> |
| – Red currants (dried) | <i>Ribes rubrum</i> |

F.2 Edible spices and herbs.

- | | |
|---------------------|------------------------------|
| – Pepper (Peruvian) | <i>Schinus molle L.</i> |
| – Horseradish seeds | <i>A Armoracia rusticana</i> |
| – Lesser galanga | <i>Alpinia officinarum</i> |
| – Safflower flowers | <i>Carthamus tinctorius</i> |
| – Watercress herb | <i>Nasturtium officinale</i> |

F.3 Miscellaneous:

Algae, including seaweed, permitted in conventional foodstuffs preparation.

F.4 Vegetable products, processed by processes permitted by this Standard.

F.4.1 Fats and oils, whether or not refined, but not chemically modified, obtained from plants other than:

- Cocoa *Theobroma cacao*
- Coconut *Cocos nucifera*
- Olive *Olea europaea*
- Sunflower *Helianthus annuus*
- Palm *Elaeis guineensis*
- Rape *Brassica napus, rapa*
- Safflower *Carthamus tinctorius*
- Sesame *Sesamum indicum*
- Soya *Glycine max*

F.4.2 The following sugars, starches and other products from cereals and tubers:

- Fructose
- Rice paper
- Unleavened bread paper
- Starch from rice and waxy maize, not chemically modified

F.4.3. Miscellaneous

- Pea protein *Pisum spp.*
- Rum: only obtained from cane sugar juice
- Kirsch prepared on the basis of fruits and flavourings permitted by this Standard

F.5 Animal products

- Aquatic organisms, not originating from aquaculture, permitted in conventional foodstuffs
- Gelatin
- Whey powder “herasuola”