# 0.1 Distinction between additives and processing aids

**FOOD ADDITIVE**

This term means “any substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly) in it or its by-products becoming a component of or otherwise affecting the characteristics of such foods. The term does not include ‘contaminants’ or substances added to food for maintaining or improving nutritional qualities”.

**PROCESSING AID**

This term means “any substance or material, not including apparatus or utensils, and not consumed as a food ingredient itself, intentionally used in the processing of raw materials, food or its ingredients, to fulfill a certain technological purpose during treatment or processing and which may result in the non-intentional but unavoidable presence of residues or derivatives in the final product"[1]

Compounds admitted by the OIV for treatment of grape, must and wines and their status as additives and processing aids and the use levels or residual limits

| Substances | INS or CAS no. | Code of Oenological Practices | | OIV Codex file reference | Additive | Processing aid | |
|---|---|---|---|---|---|---|---|
| | | Grape/ Must | Wine | | | | |
| **Acidity regulators** | | | | | | | |
| **Malic acid (D,L-; L-)** | INS 296 | File 2.1.3.1.1 | File 3.1.1.1 | COEI-1-ACIMAL | X | | Maximum use level 4 g/L[2] |
| **Lactic acid** | INS 270 | File 2.1.3.1.1 | File 3.1.1.1 | COEI-1-ACILAC | X | | Maximum use level 4 g/L[2] |
| **Tartaric acid L(+)** | INS 334 | File 2.1.3.1.1 | File 3.1.1.1 | COEI-1-LTARAC | X | | Maximum use level 4 g/L[2] |
| **Citric acid, monohydrate** | INS 330 | | File 3.3.8; 3.3.1 | COEI-1-CITACI | X | | Maximum use level 4 g/L[2] Residual limit 1g/L |
| **Potassium L(+) tartrate** | INS 336 | File 2.1.3.2.2 | File 3.1.2.2 | COEI-1-POTTAR | | X | |
| **Potassium hydrogen tartrate** | INS 336i | File 2.1.3.2.2 | File 3.1.2.2 | COEI-1-POTBIT | | X | |

| Substances | INS or CAS no. | Code of Oenological Practices | | OIV Codex file reference | Additive | Processing aid | |
|---|---|---|---|---|---|---|---|
| | | Grape/ Must | Wine | | | | |
| **Calcium carbonate** | INS 170 | File 2.1.3.2.2 | File 3.1.2.2 | COEI-1-CALCAR | | X | |
| **Potassium hydrogen carbonate** | INS 501ii | File 2.1.3.2.2 | File 3.1.2.2 | COEI-1-POTBIC | | X | |
| **Calcium tartrate** | INS 354 | | File 3.3.12 | COEI-1-CALTAR | | X | Maximum use level 200 g/L |
| **Potassium carbonate** | INS 501i | File 2.1.3.2.5 | | COEI-1-POTCAR | | X | |
| **Calcium sulfate *(liqueur wines only)*** | INS 516 | File 2.1.3.1.1.1 | | Ongoing | X | | Maximum use level 2 g/L |
| **Preservatives** | | | | | | | |
| **Ascorbic acid** | INS 300 | File 1.11; 2.2.7 | File 3.4.7 | COEI-1-ASCACI | X | | Maximum use level 0.25 g/L[3] Residual limit 300 mg/L |
| **Erythorbic acid** | INS 315 | File 1.11; 2.2.7 | File 3.4.7 | COEI-1-ASCACI | X | | Maximum use level 0.25 g/L[3] Residual limit 300 mg/L |
| **Sorbic acid** | INS 200 | | File 3.4.5 | COEI-1-SORACI | X | | Maximum use level 0.2 g/L |
| **Potassium sorbate** | INS 202 | | File 3.4.5 | COEI-1-POTSOR | X | | Maximum use level 0.2 g/L |
| **Lysozyme** | INS 1105 | File 2.2.6 | File 3.4.12 | COEI-1-LYSOZY | X | X | Maximum use level 0.5 g/L |
| **Liquid sulphur dioxide** | INS 220 | File 1.12; 2.1.2 | File 3.4.4 | COEI-1-SOUDIO | X | | Residual limit 150 mg/l for red wines, 200 mg/l for white and rosés wines, 300 mg/l: red wines, rosés and whites containing more than 4 g/l of reducing substances, 400 mg/l: exceptionally in certain sweet white wines |
| **Potassium hydrogen sulphite** | INS 228 | File 2.1.2 | | COEI-1-POTBIS | X | | |
| **Ammonium hydrogen sulphite** | CAS 10192-30-0 | File 1.12; 2.1.2 | | COEI-1-AMMHYD | X | | |
| **Potassium anhydrous sulphite** | INS 224 | File 1.12 | | COEI-1-POTANH | X | | |

# Distinction between additives and processing aids

| Substances | INS or CAS no. | Code of Oenological Practices | | OIV Codex file reference | Additive | Processing aid | |
|---|---|---|---|---|---|---|---|
| | | Grape/ Must | Wine | | | | |
| **Antioxidant** | | | | | | | |
| **Glutathione** | CAS 70-18-8 | File 2.2.8 | File 3.4.18 | COEI-1-GLUTAT | X | | Maximum use level 0.02 g/L |
| **Sequestrant** | | | | | | | |
| **Oenological carbon** | INS 153 | File 2.1.9 | File 3.5.9 | COEI-1-CHARBO | | X | Maximum use level 1 g/L |
| **Selective vegetal fibres** | - | | File 3.4.20 | COEI-1-FIBVEG | | X | |
| **Fermentation activators** | | | | | | | |
| **Ammonium chloride** | INS 510 | | File 4.1.8 | COEI-1-AMMCHL | | X | |
| **Ammonium sulphate** | INS 517 | | File 4.1.7 | COEI-1-AMMSUL | | X | Maximum use level 0.3 g/L |
| **Diammonium hydrogen phosphate** | INS 342 | | File 4.1.7 | COEI-1-PHODIA | | X | Maximum use level 0.3 g/L |
| **Thiamine hydrochloride** | CAS 67-03-8 | File 2.3.3 | File 4.1.7 | COEI-1-THIAMIN | | X | Maximum use level 0.6 g/L |
| **Cellulose food grade** | INS 460 | File 2.3.2 | | COEI-1-CELLUL | | X | |
| **Microcrystalline cellulose** | INS 460 | File 2.3.2 | File 3.4.21 | COEI-1-CELMIC | | X | |
| **Anti-foaming agent** | | | | | | | |
| **Fatty acid mono- and diglycerides** | INS 471 | File 2.3.2 | | COEI-1-ACIGRA | | X | |
| **Clarifying agents** | | | | | | | |
| **Protein of plant origin from wheat** | | File 2.1.17 | File 3.2.7 | COEI-1-PROVEG | | X | |
| **Protein of plant origin from peas** | | File 2.1.17 | File 3.2.7 | COEI-1-PROVEG | | X | |
| **Protein of plant origin from potatoes** | | File 2.1.17 | File 3.2.7 | COEI-1-PROVEG | | X | |
| **Isinglass** | | | File 3.2.1 | COEI-1-COLPOI | | X | |
| **Gelatin** | CAS 9000-70-8 | File 2.1.6 | File 3.2.1 | COEI-1-GELATI | | X | |

| Substances | INS or CAS no. | Code of Oenological Practices | | OIV Codex file reference | Additive | Processing aid | |
|---|---|---|---|---|---|---|---|
| | | Grape/ Must | Wine | | | | |
| **Egg (albumin)** | CAS 9006-59-1 | | File 3.2.1 | COEI-1-OEUALB | | X | |
| **Casein (calcium caseinate)** | CAS 9005-43-0 | File 2.1.16 | | COEI-1-CASEIN | | X | |
| **Potassium caseinate** | CAS 68131-54-4 | File 2.1.15 | File 3.2.1 | COEI-1-POTCAS | | X | |
| **Alginic acid** | INS 400 | | File 3.2.1 | COEI-1-ALGIAC | | X | |
| **Skim milk**[4] | | | File 3.2.1. | COEI-1-LAIECR | | X | |
| **Potassium alginate** | INS 402 | | File 4.1.8 | COEI-1-POTALG | | X | |
| **Calcium alginate** | INS 402 | | File 4.1.8 | COEI-1-ALGIAC | | X | |
| **Cellulose** | INS 460 | File 2.1.11.1 | File 3.2.2.1 3.2.2.2 | COEI-1-CELLUL | | X | |
| **Chitin-glucan** | CAS Chitin 1398-61-4 CAS Glucan 9041-22-9 | File 2.1.23 | File 3.2.1; 3.2.1.3; 3.4.17 | COEI-1-CHITGL | | X | |
| **Chitosan** | CAS 9012-76-4 | File 2.1.22 | File 3.2.1; 3.2.12; 3.4.16 | COEI-1-CHITOS | | X | |
| **Diatomite** | CAS 68855-54-9 | File 2.1.11 | File 3.2.2 | COEI-1-DIATOM | | X | |
| **Kaolin** | CAS 1332-58-7 | | File 3.2.1 | COEI-1-KAOLIN | | X | |
| **Perlite** | CAS 93763-70-3 | File 2.1.11 | File 3.2.2 | COEI-1-PERLIT | | X | |
| **Colloidal silicon dioxide solution** | INS 551 | File 2.1.10 | File 3.2.1; 3.2.4 | COEI-1-DIOSIL | | X | |
| **Bentonites** | INS 558 | File 2.1.8 | File 3.3.5 | COEI-1-BENTON | | X | |
| **Polyvinylpolypyrrolidone (PVPP)** | INS 1202 | | File 3.4.9 | COEI-1-PVPP | | X | Maximum use level 0.8 g/L |

| Substances | INS or CAS no. | Code of Oenological Practices | | OIV Codex file reference | Additive | Processing aid | |
|---|---|---|---|---|---|---|---|
| | | Grape/ Must | Wine | | | | |
| **Yeast protein extracts** | | File 2.1.24; 2.1.25 | File 3.2.14 | COEI-1-EPLEV | | X | |
| **Stabilising agents** | | | | | | | |
| **Sodium Carboxymethylcellulose** | INS 466 | | File 3.3.14 | COEI-1-CMC | X | | Maximum use level 0.2 g/L |
| **Metatartaric acid** | INS 353 | | File 3.3.7 | COEI-1-METACI | X | | Maximum use level 0.1 g/L |
| **Yeast mannoproteins** | | | File 3.3.13 | COEI-1-MANPRO | X | | |
| **Dimethyl dicarbonate** | INS 242 | | File 3.4.13 | COEI-1-DMDC | See footnote [5] | See footnote[6] | |
| **tartaric acid D,L-** | CAS 133-37-9 | File 2.1.21 | File 3.4.15 | COEI-1-DLTART | | X | |
| **Potassium D,L-tartrate** | | | File 3.4.15 | COEI-1-POTRAC | | X | |
| **Gum arabic** | INS 414 | | File 3.3.6 | COEI-1-GOMARA | X | | Maximum use level 0.3 g/L |
| **Copper sulphate, pentahydrate** | CAS 7758-99-8 | | File 3.5.8 | COEI-1-CUISUL | | X | Maximum use level 0.01 g/L Residual limit 1 mg/L[7] |
| **Copper citrate** | CAS 866-82-0 | | File 3.5.14 | COEI-1-CUICIT | | X | Maximum use level 0.01 g/L Residual limit 1 mg/L[4] |
| **Potassium hexacyanoferrate (II)** | INS 536 | | File 3.3.1 | COEI-1-POTFER | | X | |
| **Calcium phytate** | CAS 3615-82-5 | | File 3.3.1 | COEI-1-CALPHY | | X | |
| **PVI/PVP copolymer** | CAS 87865-40-5 | File 2.1.20 | File 3.4.14 | COEI-1-PVIPVP | | X | Maximum use level <0.5 g/L Residual limit Vinylpyrrolidone ≤ 10 µg/L Vinylimidazole ≤ 10 µg/L Pyrrolidone ≤ 25 µg/L Imidazole ≤ 150 µg/L |

| Substances | INS or CAS no. | Code of Oenological Practices | | OIV Codex file reference | Additive | Processing aid | |
|---|---|---|---|---|---|---|---|
| | | Grape/ Must | Wine | | | | |
| **Potassium polyaspartate** | CAS 64723-18-8 | | File 3.3.15 | COEI-1-POTASP | X | | Maximum use level 0.1 g/L |
| **Enzymes** | | | | | | | |
| **Arabinanases** | EC 3.2.1.99 | File 2.1.4; 2.1.18 | File 3.2.8; 3.2.11 | COEI-1-ACTARA | | X | |
| **Beta-glucanases (β1-3, β1-6)** | EC 3.2.1.6 | | File 3.5.7 | COEI-1-ACTGLU | | X | |
| **Cellulases** | EC 3.2.1.4 | File 2.1.4; 2.1.18 | File 3.2.8; 3.2.11 | COEI-1-ACTCEL | | X | |
| **Glycosidases** | EC 3.2.1.20 | File 2.1.19 | File 3.2.9 | COEI-1-GLYCOS | | X | |
| **Glucosidases** | EC 3.2.1.21 | File 2.1.19 | File 3.2.9 | | | X | |
| **Pectinlyases** | EC 4.2.2.10 | File 2.1.4; 2.1.18 | File 3.2.8; 3.2.11 | COEI-1-ACTPLY | | X | |
| **Pectinmethylesterases** | EC 3.1.1.11 | File 2.1.4; 2.1.18 | File 3.2.8; 3.2.11 | COEI-1-ACTPME | | X | |
| **Polygalacturonases** | EC 3.2.1.15 | File 2.1.4; 2.1.18 | File 3.2.8; 3.2.11 | COEI-1-ACTPGA | | X | |
| **Hemicellulases** | EC 3.2.1.78 | File 2.1.4; 2.1.18 | File 3.2.8; 3.2.11 | COEI-1-ACTGHE | | X | |
| **Urease** | EC 3.5.1.5 | | File 3.4.11 | COEI-1-UREASE | | X | |
| **Beta-glucanases** | EC 3.2.1.58 | | File 3.2.10 | COEI-1-BGLUCA | | X | |
| **Proteases** | | File 2.2.12 | File 3.3.16 | COEI-1-PROTEA | | X | |
| **Gases** | | | | | | | |
| **Oxygen** | INS 948 | File 2.1.1 | File 3.5.5 | COEI-1-OXYGEN | | X | |
| **Nitrogen** | INS 941 | File 2.2.5 | File 3.2.3 | COEI-1-AZOTE | | X | |

| Substances | INS or CAS no. | Code of Oenological Practices | | OIV Codex file reference | Additive | Processing aid | |
|---|---|---|---|---|---|---|---|
| | | Grape/ Must | Wine | | | | |
| **Argon** | INS 938 | File 2.2.5 | File 3.2.3 | COEI-1-ARGON | | X | |
| **Carbon dioxide** | INS 290 | | | COEI-1-DIOCAR | | | |
| | | File 1.7 | | | | X | |
| | | File 2.2.3 | | | X[8] | | |
| | | File 2.2.5. | | | | X | |
| | | File 2.3.9 | | | | X | |
| | | | File 3.2.3 | | | X | |
| | | | File 3.5.17 | | X | | |
| | | | File 4.1.10 | | | X | |
| | | | File 4.5 | | X | | |
| | | | File 6.15 | | X | | |
| **Fermentation agents** | | | | | | | |
| **Active Dry Yeasts** | INS 510 | | File 4.1.8 | COEI-1-LESEAC | | X | |
| **Lactic acid bacteria** | INS 342 | | File 4.1.7 | COEI-1-BALACT | | X | |
| **Yeast autolysates** | - | File 2.3.2 | | COEI-1-AUTLYS | | X | |
| **Yeast hulls** | - | File 2.3.4 | | COEI-1-YEHULL | | X | Maximum use level 0.4 g/L |
| **Inactivated yeasts** | - | File 2.3.2 | | COEI-1-INAYEA | | X | |
| **Inactivated yeasts with guaranteed glutathione levels** | - | File 2.2.9 | File 3.4.19 | COEI-1-LEVGLU | | X | Maximum use level (glutathione) 0.02 g/L |
| **Others** | | | | | | | |
| **Caramel *(special wines only)*** | INS 150a, 150b, 150c, 150d | | File 4.3; 6.1 | COEI-1-CARAMEL | X | | |

| Substances | INS or CAS no. | Code of Oenological Practices | | OIV Codex file reference | Additive | Processing aid | |
|---|---|---|---|---|---|---|---|
| | | Grape/ Must | Wine | | | | |
| **Dimethyl dicarbonate (DMDC)** | | | File 3.4.13 | | | | |
| **Silver Chloride** | | | File 3.5.15 | | | | |
| **Oenological tannins** | | File 2.1.7 File 2.1.17 | File 3.2.6 File 3.3.1 | COEI-1-TANINS | | X | |
| **Skim milk** | | | File 3.2.1 | | | | |
| **Grape sugar** | | | | | | | |
| **Rectified alcohol of agricultural origin** | | | File 3.5.1 | | | | |
| **Rectified alcohol of vitivinicultural origin** | | | File 3.5.1 | | | | |
| **Carbon dioxide** | | File 1.7 File 2.1.14 File 2.2.3 File 2.2.5 File 2.3.9 | File 4.1.10 File 4.5 | | | | |
| **Acidification by yeasts** | | File 2.1.3.1.2.1 | | | | | |
| **De-acidification by yeasts** | | File 2.1.3.2.3.1 | | | | | |
| **De-acidification by lactic acid bacteria** | | File 2.1.3.2.3.3 | | | | | |
| **Inoculation with yeasts** | | File 2.3.1 | | | | | |
| **Fumaric acid** | | | File 3.4.2; 3.4.23 | | X | | Recommanded doses of 300-600 mg/L |

Processes admitted by the OIV for treatment of grape, must and wines

| Substances | Code of Oenological Practices | | OIV Codex file reference |
|---|---|---|---|
| | Grape/Must | Wine | |

| Substances | Code of Oenological Practices | | OIV Codex file reference | |
|---|---|---|---|---|
| | Grape/Must | Wine | | |
| **Physical technics** | | | | |
| Filtration on filter bed | File 2.1.11.1 | File 3.2.2.1 | | |
| Flotation | File 2.1.14 | | | |
| Pasteurisation | File 2.2.4 | File 3.4.3.1; File 3.4.3.2 | | |
| Interruption of alcoholic fermentation by physical procedures | File 2.3.6 | | | |
| Warm post fermentation maceration of red grapes called warm final maceration | File 2.3.9 | | | |
| Maceration of raisined grapes or their pomace in wine | File 2.3.10 | | | |
| Sterilising filtration | | File 3.2.2.2 | | |
| Cold stabilisation treatment | | File 3.3.4 | | |
| Topping up | | File 3.4.1 | | |
| Blending and mixing or preparation of the cuvee | | File 3.5.3 | | |
| Hot bottling | | File 3.5.4 | | |
| Fermentation in small capacity wooden containers | File 2.3.8 | | | |
| Fermenting must or wines in contact with wood | | File 3.5.12 | | |
| Ageing in small capacity wooden containers | | File 3.5.12.1 | | |

| Substances | | Code of Oenological Practices | | OIV Codex file reference | |
|---|---|---|---|---|---|
| | | Grape/Must | Wine | | |
| **Usage of pieces of oak wood in winemaking** | | | File 3.5.12.2 | | |
| **Physical processes** | | | | | |
| **Electromenbrane** | | | | | |
| | Acidification by electromembrane treatment (Bipolar membrane electrodialysis | File 2.1.3.1.3 | File 3.1.1.4 | | |
| | De-acidification using an electromembrane process | File 2.1.3.2.4 | File 3.1.2.3 | | |
| **Elimination of sulfur dioxide by physical process** | | File 2.1.13 | | | |
| **Reverse osmosis** | | | | | |
| | Concentration of must by reverse osmosis | File 2.1.12.1 | | | |
| | Reduction of the sugar content in musts through membrane coupling | File 2.1.25.1 | | | |
| **Cryoconcentration** | | | | | |
| | Concentration of must or wine by cold | File 2.1.12.4 | File 3.5.11.1 | | |
| **Microfiltration** | | | | | |
| | Reduction of the sugar content in musts through membrane coupling (used with nanofiltration or reverse osmosis) | File 2.1.25.1 | File 3.2.2 | | |

| Substances | | Code of Oenological Practices | | OIV Codex file reference | |
|---|---|---|---|---|---|
| | | Grape/Must | Wine | | |
| **Ultrafiltration** | | | | | |
| | Reduction of the sugar content in musts through membrane coupling (used with nanofiltration or reverse osmosis) | File 2.1.25.1 | | | |
| **Nanofiltration** | | | | | |
| | Reduction of the sugar content in musts through membrane coupling | File 2.1.25.1 | | | |
| **Cations exchangers** | | | | | |
| | Acidification by cation exchanger treatment | File 2.1.3.1.4 | File 3.1.1.3<br>File 3.1.1.5 | | |
| | Tartrate stabilisation by treatment with cation exchangers | | File 3.1.1.3;<br>File 3.3.3 | | |
| **Filter plates containing zeolites y-faujasite** | | | | | |
| | Use of filter plates containing zeolites y-faujasite to adsorb haloanisoles | | File 3.2.15 | | |
| **Electrodialysis** | | | | | |
| | Tartrate stabilisation by electrodialysis | | File 3.3.2 | | |
| **Heat exchanger** | | | | | |
| | Pasteurisation | File 2.2.4 | File 3.4.3.1 | | |

| Substances | | Code of Oenological Practices | | OIV Codex file reference | |
|---|---|---|---|---|---|
| | | Grape/Must | Wine | | |
| | Biological stabilisation | | File 3.4.2 | | |
| **Partial evaporation under atmospheric pressure** | | | | | |
| | to obtain the desired degree of concentration and caramelization of sugar | File 2.1.12.3 | | | |
| **Partial evaporation under vacuum process** | | | | | |
| | to concentrate musts | File 2.1.12.2 | | | |
| | Correction of the alcohol content in wines | | File 3.5.13 | | |
| | Dealcoholisation of wines | | File 3.5.16 | | |
| **Membrane techniques for alcohol reduction** | | | | | |
| | Correction of the alcohol content in wines | | File 3.5.13 | | |
| | Dealcoholisation of wines | | File 3.5.16 | | |
| **Distillation process** | | | | | |
| | Correction of the alcohol content in wines | | File 3.5.13 | | |
| | Dealcoholisation of wines | | File 3.5.16 | | |
| **Membrane contactor** | | | | | |

| Substances | | Code of Oenological Practices | | OIV Codex file reference | |
|---|---|---|---|---|---|
| | | Grape/Must | Wine | | |
| | Management of dissolved gas in wine using membrane contactors | | File 3.5.17 | | |
| **Nanofiltration coupled with activated carbon column** | | | | | |
| | Treatment of wines using a membrane technology coupled with activated carbon to reduce excess 4-ethylphenol and 4-ethylguaiacol | | File 3.5.18 | | |
| **Ultrasounds** | | | | | |
| | Usage of ultrasound for a rapid extraction of grape compounds | | File 1.17 | | |
| **Discontinuous High Pressure Processes** | | | | | |
| | Process that consists in the reduction of indigenous organisms in grapes and musts by the use of discontinuous high pressure processes, with pressures higher than 150 MPa (1500 bar) | File 1.18; 2.1.26 | | | |
| **Pulsed electric fields (PEF)** | | | | | |

| Substances | | Code of Oenological Practices | | OIV Codex file reference | |
|---|---|---|---|---|---|
| | | Grape/Must | Wine | | |
| | A process that consists on the application of sufficiently high pulsed electric fields (PEF) to destemmed and crushed grapes that causes the permeabilization of the cell membranes especially of the grape skins | File 2.1.27 | | | |
| **Treatment by continuous high pressure processes** | | | | | |
| | Operation for the elimination of wild microorganisms in musts and wine by high pressure processing (above 200 MPa or 2000 bar) in continuous. In UHPH, the pressure is usually ranging 300-400 MPa | File 1.18 | File 2.2.10 | | |
| **Treatment of musts using adsorbent styrene-divinylbenzene beads** | | | | | |
| | Physical process of reduction or elimination of organoleptic deviations characterised as “earthy-musty” by the appropriate and controlled percolation at a high flow rate through adsorbent styrene-divinylbenzene beads | File 2.2.11 | File 3.4.22 | | |
| **Ultrasound Treatments** | | | | | |

| Substances | | Code of Oenological Practices | | OIV Codex file reference | |
|---|---|---|---|---|---|
| | | Grape/Must | Wine | | |
| | Treatment of crushed grapes with ultrasound to promote the extraction of their compounds | File 1.17 | | | |

[1] CODEX STAN 107-1981

[2] Expressed as tartaric acid

[3] When the ascorbic acid has also been used on grape or must, the final concentration, in terms of ascorbic plus dehydroascorbic acid, shall not exceed 300 mg/l.

[4] Skimmed milk is a foodstuff used in enology as a processing aid

[5] According to the national laws of different countries, DMDC is considered as an additive in some countries whereas in other countries it is considered as a processing aid.

[6] According to the national laws of different countries, DMDC is considered as an additive in some countries whereas in other countries it is considered as a processing aid.

[7] 2 mg/L for liqueur wines

[8] Carbon dioxide is considered an additive when it is added to the must. However, to continue with the production phases, after storage, it is eliminated from the must, and therefore it can be considered a processing aid.