COEI-1-PERLIT Perlite

CAS no.93763-70-3

Expanded perlite

1. Object, origin and field of application

Perlite is a vitreous rock of volcanic origin, belonging to the rhyolite group. Like glass, perlite is made of aluminium silicate and has a chemically bound water content of 1% to 2%.

To be used for oenological purposes, perlite must be dried at 150°C, grinded and then subjected to "expansion" by pre-heating between 200°C to 400°C followed exposing perlite in a flame at 800°C to 1100°C, which provokes swelling and causes a 60-fold increase in size.

Perlite is in white powder form and the final grain size is obtained after being grinded following expansion.

It is a filtration additive for wine.

2. Labelling

The purity and the storage conditions must be written on the label.

3. Limits and test trials

3.1. Odour and taste

Perlite must not give any foreign odour or taste to the wine. Place 2.5 g of perlite in 1 litre of wine. Shake. Allow to stand 24 hours. Taste and compare to wine without an addition of perlite.

3.2. Loss through desiccation

Place approximately 5 g of perlite in a capsule. Put in an incubator to 103 $\pm$ 2 °C. After two hours weight loss must not be over 1%.

3.3. Loss through calcination

Heat the dry residue obtained in point 3.2 in an oven at 550 °C. Weight loss must not be over 3%.

3.4. pH measurement

In a 250 ml recipient, place approximately 10 g of perlite. Pour in slowly, while shaking by hand 100 ml of water to wet the product and obtain a homogenous suspension.

Shake by hand from time to time or by using a magnetic stirrer. After 10 minutes, allow the suspension to stand and measure the pH level. Expanded perlite has a pH between 7.5 and 10.

3.5. Soluble products in diluted acids

Bring 10 g of dried perlite with 20 ml of concentrated hydrochloric acid (R) and 100 ml of water to a boil. Gather the perlite on an ashless filter and wash the residue with 100 ml of distilled water. After desiccation at 100°C to 105°C and incineration, and being separated from the insoluble residue filter, it should weigh at least 9.8 g that is 98% of the dry product.

3.6. Preparation of test trial solution

Place 200 ml of citric acid at 5 g per litre brought to pH 3 (R) and 10 g of perlite in a 500 ml flask that can be hermetically sealed. Place on a stirrer and shake 1 hour at a temperature of 20° plus or minus 2°C. Allow to stand, then filter by eliminating the first 50 ml of filtrate. Collect at least 100 ml of clear liquid.

3.7. Iron

Carry out the determination of iron according to the procedure described in Chapter II of the International Oenological Codex using the test trial solutions prepared according to point 3.6.

Iron content must be less than 300 mg/kg.

3.8. Lead

Carry out the determination of lead according to the procedure described in Chapter II of the International Oenological Codex using the test trial solution prepared according to point 3.6.

Lead content must be less than 5 mg/kg.

3.9. Mercury

Carry out the determination of mercury according to the procedure described in Chapter II of the International Oenological Codex using the test trial solution prepared according to point 3.6.

Mercury content must be less than 1 mg/kg.

3.10. Arsenic

Carry out the determination of arsenic according to the procedure described in Chapter II of the International Oenological Codex using 4 ml of the test trial solution prepared according to point 3.6.

Arsenic content must be less than 5 mg/kg.

3.11. Cadmium

Carry out the determination of cadmium according to the procedure described in Chapter II of the International Oenological Codex using the test trial solution prepared according to point 3.6.

Cadmium content must be less than 1 mg/kg.

4. Storage

Perlite must be kept in a well-ventilated dry place in watertight containers under temperate conditions.