RAPIDASE

HIGH SPEED ENZYMES SINCE 1922

HOW TO OPTIMISE THE USE OF OENOLOGICAL ENZYMES

PROPER FOLLOW-UP BY PERFORMING THE PECTIN TESTS

Juice clarification by static settling or flotation is key to reducing solids, avoiding oxidation, limiting herbaceous compounds, and securing alcoholic fermentation with less indigenous bacteria, yeast, and toxic compounds. A fast and efficient juice clarification will be achieved by decreasing viscosity, allowing for faster flocculation and more compact lees. A negative pectin test is mandatory, and the winemaker should follow properly after enzyme addition at the right dose and contact time.

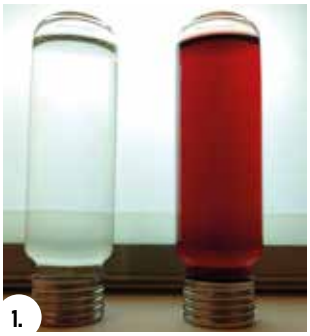
PECTIN TEST

1. Prepare the acidified alcohol solution
Ethanol 96% acidified with 1% concentrated hydrochloric acid.

2. Prepare the must to be tested
If the must is charged in solid particles, a coarse filtration on paper is recommended.

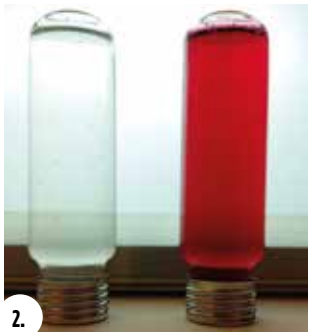
3. Add the solution to the must
In a test tube, gently mix (to avoid breaking the pectin gel) 2 volumes of the prepared solution of acidified alcohol with 1 volume of must.

4. Results



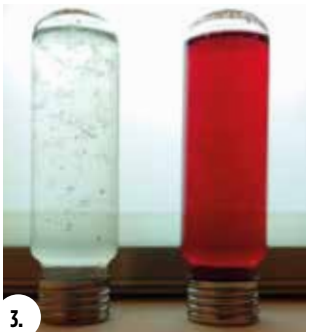
Negative
Complete pectin hydrolysis

The solution remains clear after 10 minutes reaction.



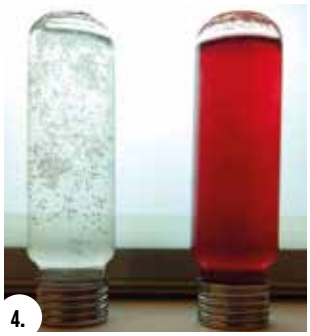
Positive
Low presence of pectin

When mixing, small bubbles form and slowly float upwards.



Positive
Presence of pectin

When mixing, big bubbles form that can't easily move up.



Positive
Heavy presence of pectin

Heavy bubbles and a ring of gel appear on the surface of the liquid after 10 minutes reaction.

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PROPER FOLLOW-UP BY PERFORMING THE GLUCAN TESTS

Degradation of both simple and complex pectic polysaccharide chains, as well as glucans from rotten grapes, will improve filtration, speed up and enhance clarification after fining. A negative glucan test is mandatory, and the winemaker should follow up properly after enzyme addition at the right dose and contact time.

GLUCANS TEST
≥ 15 mg/L

1. Prepare the solution of acidified alcohol
The solution is ethanol, 96% acidified with 1% concentrated hydrochloric acid.

2. Prepare the must to be tested
If the must is charged with solid particles, coarse filtration on paper is recommended.

3. Add the solution to the must
In a test tube, mix gently two volumes of must with one volume of the acidified alcohol solution you already prepared.

4. Results
Glucans are present if white or grey fibres appear.

1. White wine
2. Rosé wine
3. Red wine

GLUCANS TEST
(Between 3-15 mg/L)

1. Centrifuge the first test or directly the wine or must at 3 000 revolutions per minute for 10-15 minutes.

2. Dissolve the sediment from centrifugation with 5 mL of distilled water, then add 5 mL of acidified alcohol.

3. Mix gently and wait between 4 minutes and 1 hour until the appearance of filaments or small flakes indicates the presence of glucans.

NB: Glucans could be difficult to detect in a non-depectinized must. It will be recommended to do it on must after settling or on wine.

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