

ProtoCheck



QUICK METHOD FOR THE VALUATION OF POTENTIAL PROTEIN INSTABILITY IN WINES AND BEVERAGES WITH ACIDIC pH

Analytic valuation of protein instability in wines has been performed, up to now, through different methods that are not giving univocal results, even on the same wine, resulting in uncertainty over the treatment to be applied.

For such reasons, it has been decided to proceed in studying a new method that could be absolutely standardizable, reliable, of easy and quick use, useful for wines, musts, juices and other beverages at acidic pH.

ProtoCheck, patented by prof. Celotti of University of Udine, is based on the reaction of potentially unstable proteins present in the wine with a blend of stabilized anionic reagents.

With respect to other tests, the "specific" reaction that will take place does not interact with other substances and, in seconds, causes a turbidity perfectly measurable with a turbidimeter.

ProtoCheck kit allows for performing the test directly on the sample, in its original condition.

ADVANTAGES OF ProtoCheck ARE:

- The sample does not need filtration.
- Rapidity and specificity of the reaction with potentially unstable proteins.
- No significant interferences.
- The method is standardizable, which makes possible having comparable results between different laboratories.
- Simplicity of analysis, (even in the cellar, taking the sample directly from the tank).
- Precise determination of the dosage necessary for the bentonite treatment

INSTRUCTIONS FOR USE:

1. Measure turbidity **T1** on the sample "as is", not filtered, by meaning of a turbidimeter that can measure also value of 0,1 NTU. Be sure that the value (NTU) remains stable, not changed by the presence of air or gas bubbles. If necessary, strip gas away by meaning of ultrasound.
2. Fill the test tube with the sample "as is" up to the mark shown by the arrow. Open the tube just immediately before its use.
3. Close the test tube, delicately turn it upside down avoiding formation of bubbles of air. Pour the liquid into the cuvette of the turbidimeter.
4. One minute after mixing the sample with the reagent, measure the turbidity **T2** and verify, with a second reading, the stability of this value. If **T2** increases, make further readings during the following 3-4 minutes until reaching a stable reading. If the value decreases, use the highest value measured.
5. Calculate the **ProtoCheck** value, according the following formula $T2 - (T1/1,5^*)$ where *1,5 is the dilution factor.

The beverage is considered stable when the ProtoCheck value is = 0

Example 1: STABLE

Turbidity of sample as such (**T1**) 22,5 NTU
Turbidity of sample+**ProtoCheck**(**T2**)=15 NTU

$$\text{ProtoCheck} = (15 - 22,5/1,5) \rightarrow 0$$

Example 2: UNSTABLE

Turbidity of sample as such (**T1**) 15 NTU
Turbidity of sample+**ProtoCheck**(**T2**)=15 NTU

$$\text{ProtoCheck} = (15 - 15/1,5) \rightarrow 5$$

Attention: ProtoCheck value must be always ≥ 0 . When making fining trials, wait till the fining agents completely precipitate or separate solids from clear liquid by filtration or centrifugation before using the ProtoCheck test. Fining and stabilising agents can interfere with ProtoCheck.

PACKING:

Box of n. 50 **ProtoCheck** determinations

NOTE:

Keep **ProtoCheck** at room temperature and protected from light; open the test tube immediately before use.

This product is not considered harmful and therefore it does not require a Material Safety Data Sheet.

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