



# OENODIN

STABILAB  
THE NEW STANDARD FOR  
TARTRATE STABILITY TESTING

# Stabilab



Manage  
wine stabilization  
with  
precision





# Effective, precise and reliable measurement of wine tartaric instability and treatment efficiency

STABILAB is a tartaric instability analyzer designed by a joint team of experts from INRA (French National Agronomy Research Institute) and OENODIA. As an integral part of OENODIA's comprehensive wine stabilization solutions using Electrodialysis, also known as STARS (Selective Tartrate Removal System), this compact and user-friendly unit serves two purposes. First, the DIT Test function (Degree of Tartaric Instability Test) provides the exact rate of deionization necessary to achieve perfect stability in a wine. Second, once the stabilization treatment has been performed, the ISTC50 Test verifies its effectiveness and provides a guarantee of the wine's stability, based on the cold hold standard of -4°C for 6 days. For the convenience of wineries, STABILAB can be set up to run a Davis test.



## WHY USE STABILAB?

- It is the testing method globally recognized as the most reliable and precise for measuring a wine's tartaric stability
- Jointly designed and developed by INRA and OENODIA
- Easy to use and cost effective, up to 8 probes per unit
- Fast and efficient verification of tartrate stability treatment
- Effective and accurate repeatability of test results
- Resulting in full control over your wines' stabilization treatment

## HOW DOES IT WORK?

Using a wine sample, STABILAB's DIT Test calculates the exact degree of tartaric instability which is in turn used to operate OENODIA's Electrodialysis Tartrate stabilization unit. Tartaric Instability is expressed in % change of conductivity.

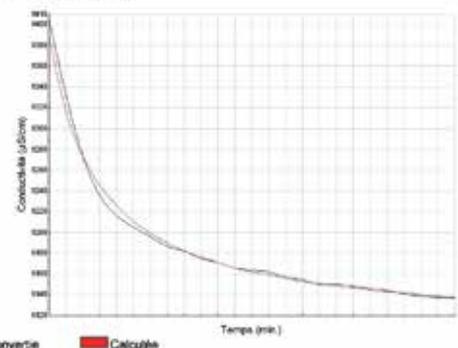
First, the machine measures the wine's initial conductivity. Crystallization is then triggered by introducing potassium bitartrate and lowering the wine's temperature to -4°C/24.8°F. As the newly formed crystals precipitate, the wine's conductivity naturally decreases. Over the course of a four hour period, the wine's conductivity is measured regularly in order to generate a mathematical model which determines the percentage change in conductivity required to achieve stability. This target variable, key to achieving absolute stability, can then be applied to each individual wine. In its final step, the STABILAB software analyzes all data obtained to determine the wine's degree of tartaric instability, expressed in % change in conductivity. For safety and verification purposes, the STABILAB software shows the result as a calculated and actual curve projected to infinity.

The numeric value provided by the STABILAB software is then entered into the Electrodialysis unit's interface to indicate the treatment rate required for Tartrate stabilization. The Electrodialysis unit then extracts the exact amount of ions (primarily tartrate ions, potassium and calcium) required to reproduce the prescribed conductivity drop in the wine.

**DIT** Nouveau le 08/12/2010 à 18:53  
Vin présumé INSTABLE

| °C   | min. | Con. | Conco. | Conco. |
|------|------|------|--------|--------|
| -4.0 | 0    | 1406 | 1406   | 1390   |
| -4.0 | 10   | 881  | 1555   | 1371   |
| -4.0 | 20   | 565  | 1275   | 1354   |
| -4.0 | 30   | 548  | 1230   | 1341   |
| -4.0 | 40   | 538  | 1216   | 1328   |
| -4.0 | 50   | 534  | 1205   | 1311   |
| -4.0 | 60   | 530  | 1195   | 1195   |
| -4.0 | 70   | 526  | 1187   | 1180   |
| -4.0 | 80   | 524  | 1182   | 1162   |
| -4.0 | 90   | 521  | 1175   | 1155   |
| -4.0 | 100  | 519  | 1171   | 1151   |
| -4.0 | 110  | 517  | 1165   | 1145   |
| -4.0 | 120  | 516  | 1164   | 1142   |
| -4.0 | 130  | 515  | 1162   | 1138   |
| -4.0 | 140  | 513  | 1157   | 1136   |
| -4.0 | 150  | 512  | 1155   | 1132   |
| -4.0 | 160  | 510  | 1150   | 1131   |
| -4.0 | 170  | 510  | 1145   | 1145   |
| -4.0 | 180  | 508  | 1148   | 1147   |
| -4.0 | 190  | 508  | 1145   | 1145   |
| -4.0 | 200  | 507  | 1144   | 1143   |
| -4.0 | 210  | 505  | 1141   | 1142   |
| -4.0 | 220  | 505  | 1138   | 1140   |
| -4.0 | 230  | 504  | 1137   | 1138   |
| -4.0 | 240  | 504  | 1137   | 1138   |

|                                   |       |
|-----------------------------------|-------|
| Conductivité initiale (µS/cm)     | 1406  |
| Coefficient de conversion         | 2.256 |
| Coefficient de corrélation        | 0.997 |
| Conductivité à 4h (µS/cm)         | 1138  |
| Chute de conductivité à 4h        | 19.1% |
| Conductivité à 24h (µS/cm)        | 1113  |
| Chute de conductivité à 24h       | 20.8% |
| Conductivité à l'infini (µS/cm)   | 1108  |
| Taux de traitement électrodialysé | 21.2% |
| Température initiale (°C)         | 15.5  |





## The standard for quantifying wine stability



### GUARANTEEING A WINE'S "QUALITY"

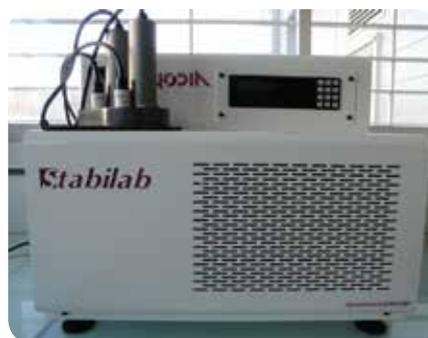
The ISTC 50 test was designed by INRA and Oenodia to verify the Electrolysis treatment and double check that the processed wine is perfectly and sustainably stabilized (6 days at  $-4^{\circ}\text{C}/24.8^{\circ}\text{F}$ ). The ISTC50 test consists in dissolving a very precise amount of potassium bitartrate in a predefined amount of stabilized wine. The wine sample is then cooled to  $-4^{\circ}\text{C}/24.8^{\circ}\text{F}$  while constantly being stirred. Conductivity is measured regularly over a certain period of time to determine the exact range of conductivity change. The variation of this value indicates the effectiveness of the wine's stabilization treatment and thus guarantees a wine's stability at  $-4^{\circ}\text{C}/24.8^{\circ}\text{F}$  for at least 6 days.

A full range of devices, for all needs:

|        | Number of Probes | Dimensions [cm/in]                 | Weight [kg/lbs] |
|--------|------------------|------------------------------------|-----------------|
| STAB 1 | 1                | 50 x 40 x 40 cm<br>20 x 16 x 16 in | 40 / 90         |
| STAB 1 | 2                | 50 x 40 x 40 cm<br>20 x 16 x 16 in | 40 / 90         |
| STAB 1 | 4                | 75 x 50 x 40 cm<br>30 x 20 x 16 in | 65 / 150        |
| STAB 1 | 8                | 75 x 50 x 40 cm<br>30 x 20 x 16 in | 65 / 150        |



STAB 1



STAB 2



STAB 4 / STAB 8

# OENODIA

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