

EPYCA SWEET ML-STOP

**NATURAL CO-ADJUNCT FOR PRODUCTION OF SWEET WINES
IN ABSENCE OF MALOLACTIC FERMENTATION AND WITHOUT ADDED SULFITES**

EPYCA SWEET ML-STOP is a **natural co-adjunct for production of white and rosé wines without malolactic fermentation and without added sulfites, designed to integrate in sweet white and rosé winemaking protocols.**

EPYCA SWEET ML-STOP **provides for immediate protection from oxidation, together with a prompt stabilization of the aromatic and color components of the must**, thus preserving at best the grape's aromatic and polyphenolic patrimony without the use of sulfur dioxide.

The outcome is the **production of more all-rounded, stable and longer lasting no added sulfites sweet wines** distinguishing themselves for freshness, increased mouthfeel and volume.

EPYCA SWEET ML-STOP kit consist of 4 different formulations to be used sequentially and synergistically to replace the sulfitation:

EPYCA 1 SWEET is used during must's fermentation. *Its activity is to protect from oxidation and enhance the activity of wild or added yeasts and is added to the must at yeasts inoculation or to stimulate the wild yeast and better start the alcoholic fermentation.*

EPYCA ML-STOP is used *at the end of the alcoholic fermentation to inhibit the start of malolactic fermentation*

EPYCA 2 SWEET is used during wine aging **for its high stabilization and equilibration activity and is added after clarification and cross-flow filtration or tartaric stabilization.** *EPYCA 2 SWEET refines the wine's organoleptic and preservation characteristics.*

EPYCA 3 SWEET is used **before bottling** to improve the wine stability and prolong the preservation in time.

SUGGESTED MODE OF USE

Studies conducted by Bioma suggest the use of the products in a ration of 1 *EPYCA SWEET ML-STOP* kit in 20 HL (2'000 liters) of must/wine. Thoroughly shake before use.

EPYCA 1 SWEET and EPYCA 2 SWEET are to be mandatory used.

EPYCA 3 SWEET use is optional and **decision to use it is entirely left to the judgment of the enologist** should he desire to extend the preservation of the wine in time or should he estimate that the wine has not sufficient anti-oxidative protection.

EPYCA ML-STOP is to be imperatively used at a ratio of 1/1'000 - 1 liter of EPYCA ML-STOP for 10 HL (1'000 liters) of wine.

PRODUCT FOR ENOLOGICAL USE

In accordance with Regulation (EC) N. 606/2009, Codex Alimentarius OIV and OIV Practices (Art. 2.1-2.1.7-3.2-3.2.6).

EPYCA SWEET ML-STOP is made with Oenological Tannin (OENO 6/2008 and OENO 352/2009 F-COEI-1-TANINS/INS.181) obtained from natural polyphenolic complexes extracted from Grape Seeds (*Vitis vinifera*).

REGISTERED AT ECOCERT OENOLOGIE FOR USE IN BIOLOGICAL AND NOP WINES

In accordance with Regulation (EC) N. 834/2007 – RUE 203/2012 and NOP Regulation ("Made with ...").

PRODUCT APPROVED FOR WINEMAKING BY TTB

Tannin: The residual amount of tannin, calculated in gallic acid equivalents, shall not exceed 0.8 g/L in white wine and 3.0 g/L in red wine. Only tannin which does not impart color may be used in the cellar treatment of juice or wine. GRAS per FDA advisory opinions dated 4/6/59 and 3/29/60. Total tannin shall not be increased by more than 150 milligrams/liter by the addition of tannic acid (poly-galloylglucose).

ALLOWED EU LABELING

The EU Commission allows winemakers, whose wines have total SO₂ levels below 10mg/l and have not added sulfites, to indicate on their wines labels: **"Without Added Sulfites"** or **"No Added Sulfites"**, notwithstanding the respect of the EU Regulation 1169/2009 on the voluntary disclosure of alimentary ingredients (Opinion rendered to the Italian Ministry of Food and Agriculture in 2015).

INDICATIVE PROTOCOL FOR SWEET WINE PRODUCTION IN ABSENCE OF MALOLACTIC FERMENTATION AND WITHOUT ADDED SULFITES

1. LOADING GRAPES
2. PRESSING GRAPES
3. SEPARATION OF MUST
4. ADDITION OF PECTOLITIC ENZYMES AT DRAINING PRESS MOMENT
5. REPLACEMENT AND REFRIGERATION OF MUST
6. ADDITION OF ASCORBIC ACID
7. ADDITION OF TANNINS
8. FLOTATION WITH NITROGEN
9. TRANSFER
10. MUST ANALYSIS
11. ADDITION REHYDRATED YEAST FOR THE PRODUCTION OF GLUTATHIONE
12. **ADDITION OF "EPYCA 1 SWEET"**
13. START ALCOHOLIC FERMENTATION AT CONTROLLED TEMPERATURE
14. ADDITION OF AMMONIUM PHOSPHATE
15. IN THE COURSE OF FERMENTATION ADDITION OF YEAST PEELS
16. IN THE MIDDLE OF FERMENTATION ADDITION OF BENTONITE AND OTHER PRODUCTS (IF APPLICABLE)
17. CORRECTION IN GRADE OR ACID
18. ANALYSIS (CONTROL FOR THE END OF ALCOHOLIC FERMENTATION)
19. **ADDITION OF "EPYCA ML-STOP"**
20. ANALYSIS (CONTROL FOR THE END OF MALOLACTIC FERMENTATION)
21. TRANSFER IN SATURATED TANK WITH NITROGEN (EVENTUALLY ADDITION OF TANNINS)
22. **ADDITION OF "EPYCA 2 SWEET" AFTER 10 HOURS**
23. BOTTLING AND CONTINUING NORMAL CHAMPENOISE OR CHARMAT-MARTINOTTI METHODS ACTIVITIES
24. **OPTIONAL ADDITION OF "EPYCA 3 SWEET" AFTER FILTRATION, AND BEFORE BOTTLING,**

CATEGORICALLY OBSERVE ALL STANDARD ANTI-OXIDATIVE PROCESSES (TO AVOID EXTERNAL CONTAMINATION)

This protocol has been compiled and optimized based on tests carried out with various wine producers and the results obtained by the application of *EPYCA SWEET ML-STOP* in various types of white and rosé wines production.

This protocol does not replace the know-how and skills of the winemaker and the enologist.

ADDITIONAL INFORMATION

Technological effects

- ✓ Sulfur dioxide usage elimination
- ✓ Regularity/stability of the fermentation process
- ✓ Flavor protection
- ✓ Color protection
- ✓ Increase of the tartaric and proteic wine stability
- ✓ Increased flavor persistence stability
- ✓ Increased shelf life

Organoleptic Results

- ✓ Increase equilibrium of taste structure
- ✓ Brilliant color tones
- ✓ Clean, intense and persistent Aroma
- ✓ Flavor soft, voluminous and balanced

Packaging and storage

- ✓ 1 liter (0.23 gallon) HDPE-bottles, 5 liter (1.14 gallon) and 10 (2.27 gallon) HDPE-cans
- ✓ Bottles and cans to be kept properly closed to protect the product from contamination
- ✓ The product has to be stored in dry, ventilated and fresh area Protect from freezing
- ✓ Store between 10°C (50°F) and 32°C (90°F) to avoid separation and prolong shelf life
- ✓ Stir well before using

Regulatory information/classification and labeling

Chemical substances are classified according to their physical, health, and environmental hazards. The hazards are communicated via specific labels and the Safety Data Sheets (SDS). With the GHS (Global Harmonized System) hazard communication has been standardized worldwide so that the intended audience (workers in production, emergency responders and consumers) can better understand the hazards of the chemicals in use. In the EU, the GHS principles have been laid down in the Regulation (EU) No. 1272/2008 (CLP).

According to this regulation, *EPYCA SWEET ML-STOP* is **not classified and labeled** for physical-chemical properties, for health effects and for the environment.

MANUFACTURER CONTACTS

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