

MALOLACTIC BACTERIA

	Malo-Plus	Malo-Plus HA	Malo-Multi	Malo-D	Malo-Vigna
Genus and Species	<i>n° 1 Oenococcus oeni</i>	<i>n° 1 Oenococcus oeni</i>	<i>n° 3 Oenococcus oeni</i>	<i>n° 1 Oenococcus oeni</i>	<i>n° 1 Oenococcus oeni</i>
Metabolism	<i>Heterofermentative</i>	<i>Heterofermentative</i>	<i>Heterofermentative</i>	<i>Heterofermentative</i>	<i>Heterofermentative</i>
Isolation	<i>Lombardia--Barbera</i>	<i>Lombardia--Chardonnay</i>	<i>Lombardia</i>	<i>Canada</i>	<i>Piemonte--Nebbiolo</i>
Description	Freeze-dried	Freeze-dried	Freeze-dried	Freeze-dried	Freeze-dried
Application	<ul style="list-style-type: none"> • Co-inoculation • Late inoculation • Direct inoculation after alcoholic fermentation 	<ul style="list-style-type: none"> • Co-inoculation • Late inoculation • Direct inoculation after alcoholic fermentation 	<ul style="list-style-type: none"> • Co-inoculation • Late inoculation • Direct inoculation after alcoholic fermentation 	Direct inoculation after alcoholic fermentation	Direct inoculation after alcoholic fermentation
Cells (billions/hl)*	400	400	400	300	400
ML Fermentation Speed	++	++	++	+	+++
Volatile Acidity Production	Low	Low	Low	Low	Low
Diacetyl Production	Low	Low	Medium	High	Medium
Biogenic Amines Production	No	No	No	No	No
Cinnamoyl Esterase Activity	Negative	Negative	Negative	Negative	Negative
Wine Conditions					
pH	> 3.20	>3.10	> 3.20	> 3.35	> 3.20
Max. % by Vol.	16.5	14.5	16.0	15.0	17.0
Total SO₂ Tolerance at pH 3.50	50 ppm	40 ppm	50 ppm	40 ppm	60 ppm
Temperature Range	63-80°F (17-27°C)	63-80°F (17-27°C)	63-80°F (17-27°C)	61-80°F (16-27°C)	63-80°F (17-27°C)
Sensory Expression					
Fruity	+++	+++	++	+	++
Spicy/Complex	+	+	+++	+++	+++
Overall Effect	Enhances varietal characteristics and intense fruit flavors	Slightly less intense than Malo-Plus, used for sparkling wines	The spiciest, with complex notes	Imparts buttery, toasty, and nutty flavors	Imparts complex flavors, finesse, and elegance and is suitable for interaction with wood

*refers to suggested dosage

Dosage and Addition

Dosage as indicated on package label. Remove the pouch from the freezer and hold at room temperature for 15 minutes before use. It is recommended to rehydrate the freeze-dried powder in 10 parts of chlorine-free water at 68°F (20°C) for 15–20 minutes to maximize viability of the bacteria.

Storage and Shelf Life

Store in a freezer in the original package at 0°F (-18°C) to maintain maximum activity for up to 24 months. Carefully reseal partial packets in case of remaining product. The integrity of the product is guaranteed only if it is stored as indicated in this Technical Data Sheet.

Packaging

These products are available in a variety of sizes (1,000 gal – 100,000 gal) depending on the strain.

Product for Enological Use Only

Non-GMO, Allergen-free

Please refer to the SDS for safe handling requirements.