

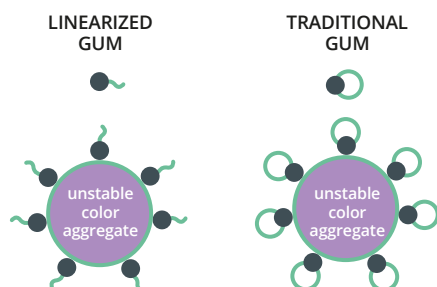
# GUM ARABIC

*Gum Arabic has long been used in winemaking for its ability to prevent clouding and the formation of precipitates caused by metals and unstable color. In recent years, there have been advances in understanding the mechanisms of action of gums and in the development of production processes, which make it possible to obtain products that are more effective and suitable for cellar application.*

## LINEARIZED VEREK GUM AND EFFECTS ON FILTERABILITY

Due to an innovative filtration process which modifies the molecular structure from globular to linear, Enartis can now produce a Verek Gum Arabic that keeps its **stabilizing efficacy**. It is microfilterable and **stabilizes the filterability index** of wine.

### MODE OF ACTION of linearized gum vs. traditional gum:



The color aggregate stabilized by linearized Verek Gum Arabic has a smaller total volume and is therefore more filterable.

	FI* AT THE START OF TEST	FI* AFTER 1 MONTH
Red wine filtered with a tangential filter	3	124
Red wine filtered with tangential filter + 200 mL/hL Maxigum F	4.5	12

\*Filterability index (FI) calculated by filtering wine with a 0.65 µm membrane.  $FI = \{(T3 - T1) - 2 (T2 - T1)\}$

T1 = seconds required to filter 200 mL

T2 = seconds required to filter 400 mL

T3 = seconds required to filter 600 mL

Wine is considered filterable when  $FI \leq 14$ .

## GUM ARABIC

The use of gum Arabic in winemaking is to prevent the occurrence of turbidity and the formation of precipitates in the bottle.

Its stabilizing ability is due to the molecular structure consisting of, a hydrophilic polysaccharide part and a hydrophobic part, of a protein nature. By chemical affinity, the protein fraction binds to the unstable matter of wine, hydrophobic aggregates consisting of coloring substance, ferric phosphate or tartrate. The polysaccharide part, on the other hand, creates a hydrophilic layer around these aggregates which increases their solubility.

By virtue of its double hydrophobic-hydrophilic nature, gum Arabic also interacts with other substances in wine such as aromatic compounds, polyphenols and CO<sub>2</sub> produced during second fermentation. From this derives its effect on the organoleptic quality of wine which generally manifests itself with an increase in aromatic persistence and the reduction of astringency.

In practice, the effectiveness of gum depends on its characteristics and on changes in the molecular structure induced by the production process.

## THE ENARTIS GUM ARABIC RANGE

Over 40 years of experience in the production of gum Arabic and studies conducted with significant research centers allow Enartis to offer a wide range of gum Arabic created to meet specific needs without losing sight of the ease-of-use.

	SEYAL GUM	VEREK GUM
Protein Content	almost 1.5%	almost 3%
Rotation	from +40° to +50°	from -26° to -34°
Filterability	▲▲▲	▲
Color Stabilization	▲	▲▲▲▲▲
Chelation of Metals	▲▲▲	▲▲
Tartrate Stabilization	▲▲	▲
Perlage Improvement	▲▲	▲▲▲▲

Main species-specific characteristics of gum Arabic. Scale from 1 (minor) to 5 (major).

# GUM ARABIC

## ENARTIS VEREK GUM

Differences in the production process determine the different filterability and organoleptic impacts, but they are all equally highly efficient in color stabilization.

### MAXIGUM F

#### FILTERABLE

- Verek gum in solution
- Excellent color stabilization
- Good effect on *perlage* quality
- Recommended for addition before microfiltration
- Stabilization of the filterability index of wine

### MAXIGUM PLUS

#### FILTERABLE AND IMPACTFUL

- Verek gum and mannoproteins in solution
- Excellent color stabilization
- Exceptional effect on *perlage* quality
- Outstanding organoleptic balance
- Recommended for addition before microfiltration
- Stabilization of the filterability index of wine



FILTERABILITY



## ENARTIS SEYAL GUM

Seyal gum Arabic are subjected to a special purification and hydrolysis process that allows Enartis to obtain unique products for organoleptic quality, filterability and effectiveness.

### CITROGUM

#### CLEAR AND MICROFILTERABLE

- Seyal Gum in solution
- Clear and colorless
- Good effect on tartrate stability
- Good effect on *perlage* quality
- Microfilterable

**enartis**

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