



FLOTATION

FLOTATION PRODUCTS

FAST CLARIFICATION TECHNIQUE

Flotation is a clarification technique which utilizes entrained gas adsorbed to particulate matter to create a difference in specific mass. This promotes the lighter materials to float within the liquid allowing separation.

Comparing traditional clarification techniques have shown characteristically that time, labor and energy to be intensive and may be detrimental to overall juice quality with respect to oxidation.

Process	PROS	CONS
Static settling	Good yield	High energy requirement Requires settling time
Centrifugation	Speed	Expensive (running costs and maintenance) Oxidative
Vacuum filtration	Speed	Needs adjuvants High oxygen uptake
Flotation	Speed High yield Allows choice of treatment: Oxidative (AIR) Reductive (Nitrogen) Low running and maintenance costs	Requires the careful choice of adjuvants

Flotation offers a technology which is fast and extremely cost effective. However, the technology requires consideration of the best adjuvants to maximize its potential.

Adjuvants are utilized to improve the efficiency of the process and allow the winemaker to:

- Obtain the desired turbidity.
- Create floccules able to uptake the micro-bubbles.
- Modify must characteristics, if so desired.

Pectolytic Enzymes – Reduce viscosity in the juice matrix.

ZIMAFLAR FLOT is an enzyme blend consisting of pectolytic enzymes able to reduce the viscosity. Its specific nature promotes formation of pectin chains of ideal length to promote floccule formation and enhance flotation

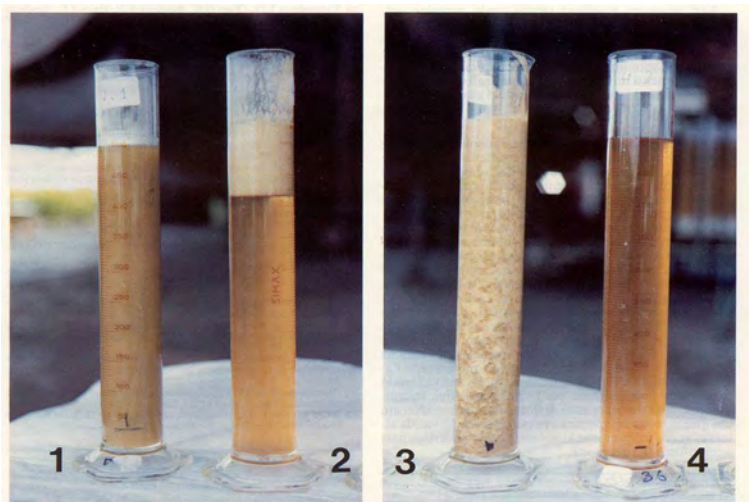
Positive Charged Adjuvants – Promote the formation of floccules and increase the degree of clarity.

FLOTTOGEL® The first enological adjuvant selected through the evaluation of the surface electrical charge. FLOTTOGEL® has been applied successfully in clarification via flotation of grape must and fruit juices. The raw materials used in its manufacturing guarantee the formation of a hydrophobic floccule, able to adhere easily to the gas used in the processes of separation through flotation. FLOTTOGEL® is furthermore characterized by superior clarifying but a limited tannin-removing capacity. It is therefore recommended for low-tannin wines that need clarification to make them brilliant or to improve their filterability while not affecting their structure and color.

Negative charged adjuvants – Improve compaction of the solids fraction and increases yield.

FLOTTOBENT® is a natural activated bentonite, suitable for use in clarification through flotation. It is completely odorless and composed of selected, very pure montmorillonites. The sodium activation process and fine particulate nature ensures it is easily dispersed in water without forming lumps. FLOTTOBENT® is a superior bentonite with strong deproteinization activity producing a hydrophilic floc, ideal for separation by flotation.

FLOTTOCARB® is a vegetable carbon activated with phosphoric acid whose particles possess the ideal chemical-physical structure and characteristics for use in flotation, readily adhering with the flotation gas. FLOTTOCARB® possesses a strong decolorizing activity specific to the anthocyanin's and oligomers that are susceptible to oxidation without modifying the organoleptic profile.



1. Must pre-flotation
2. During flotation
3. Flotation lees
4. Clear juice post flotation