

PROTOCOL • MUST FLOTATION

PRINCIPLE

The aim of flotation is to **quickly clarify the juice after pressing** in order to obtain a clear, stable must suitable for controlled fermentation.

SAFETY

PPE suitable for cellar work.

EQUIPMENT & PREREQUISITES

- Flotation pump (with gas injection system)
- Gas tank (nitrogen recommended)
- Peristaltic pump or venturi system
- Suitable tank (vertical, sufficient volume)
- Turbidimeter

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MUST PREPARATION

Before any operation, **must preparation** is essential to ensure the effectiveness of flotation.

- Carefully disinfect the pump and all equipment used
- Protect the must with SO₂: **3 to 5 g/hL**
- Carry out a **pectin test** in the laboratory

The pectin test determines the need for prior enzymatic treatment.



Poor must preparation is the cause of most problematic flotations.

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ENZYMATIC MANAGEMENT



IF THE PECTIN TEST IS POSITIVE:

- Add **VINOCLEAR CLASSIC** - **2 to 3 mL/hL** (pectin-lyase activity).
The enzyme can be added directly during tank filling to save time.

OR

- Add **VINOZYM ULTRA FCE** - **2 to 3 mL/hL** The enzyme can be added at pressing to anticipate flotation.

Only start flotation **when** the pectin test becomes **negative** (pectins fully hydrolyzed). In case of grey rot and suspected contamination of grapes by *Botrytis cinerea*, carry out a **glucan test**.



IF THE GLUCAN TEST IS POSITIVE:

- Add **VINOTASTE PRO** or **ÆNOFLOW MAX** at **10 mL/hL**

Only start flotation **when** the glucan test becomes **negative**.



For more information, find the **Lamothe-Abiet protocols** for the treatment of **glucans** and the **pectin test** online on our website:



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SETTING UP FLOTATION

- Connect the suction hose to the lower valve (draining); the discharge hose to the upper valve (racking)
- Check the direction of rotation of the pump
- Saturate the tank headspace with CO₂ to limit oxidation

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PREPARATION AND CHOICE OF FINING AGENT

The fining agents used in flotation play a key role in particle aggregation. Liquid fining agents (**GELFLOT®**, **GREENFINE® MUST LIQUID**) do not require a rehydration step.

For powdered fining agents:

- Powdered gelatins: dilute in hot filtered water (40–45 °C), without exceeding 55 °C (protein denaturation).
- Plant protein-based fining agents (pea protein): **GREENFINE® FLOT**, **GREENFINE® MUST**. Rehydrate 2 to 3 hours before addition for better reactivity (recommended).

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INJECTION AND MIXING

Start the flotation pump.

- Inject the fining agent via the peristaltic pump (or venturi)
- Rinse the peristaltic pump tubes with hot water after addition
- Ensure homogeneous mixing of the tank for about 30 minutes

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FLOTATION PARAMETERS

Increase the pump pressure to **4 bar** and the gas flow rate (nitrogen recommended) to **20 L/min**. Calculate the required flotation time for the implemented volume:

- **Flotation time (minutes): $1.5 \times \text{Tank volume (hL)} / \text{Pump flow rate (hL/h)}$**

Example: for a 100 hL tank with a 300 hL/h pump = 30 min of injection.

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JUICE TRANSFER

Wait at least 30 minutes after flotation before performing a transfer. Do not exceed 4 hours of waiting. Determine the optimal transfer time by measuring turbidity at the tasting tap.

After the transfer:

- Measure the turbidity again in the receiving tank
- Start cooling quickly

LEES MANAGEMENT

Relocate the lees into a dedicated tank. Treat them separately according to the cellar strategy (additional settling, valorization, etc.).



KEY POINTS & BEST PRACTICES

Some parameters are essential to master:

- **Pectins and glucans:** musts must have been treated with enzymes
- **Temperature:** minimum 13°C, ideally between 15°C and 20°C
- **Suspended solids:** maximum 2.5% of the total volume to be floated
- **Tank shape and size:** no cigar-shaped tanks, no horizontal tanks and a juice height between 1 meter and 7 meters

New 2026



GREENFINE® FLOT **Fast-Track results**

Natural formulation based on pea protein and chitosan.

Thanks to its expertise in plant-based fining, Lamothe-Abiet has developed GreenFine® Flot, a high-performance formulation for fast and efficient flotation, even on challenging musts.

100% natural, non-allergenic, vegan, and approved for EU organic use, GreenFine® Flot respects the most sensitive musts and enhances their aromatic potential.

BENEFITS

- Rapid clarification of musts, ready to ferment in record time.
- Synergy between pea proteins and chitosan for efficient and controlled lees compaction.
- Energy optimisation by reducing cooling requirements.
- Reduced oxidation risks thanks to rapid application and decreased oxidized and oxidizable phenolic compounds.
- Improved microbiological safety after pressing.