

Filtration

Functional unit: 4 900 l wine ~ 100 ha vineyard

- Cellulose plates
- Diatomaceous earth
- Tangential

Cellulose plates



Plate filtering is made up of a series of cellulose filters. The filter closes tightly with the help of a clamping spindle, to encourage the flow of wine and avoid excessive leakage from the plates.

Before starting the filtration cycle, it is advisable to wash the plates and the filtration circuit to eliminate the flavour of the paper. At the time of publication, this is the most widely-used technology.

ENVIRONMENTAL ASPECTS

- | | |
|--------------------------------|------------------------------------------------|
| ✓ Energy consumption | ✓ Non-hazardous waste |
| ✓ Water consumption | <input type="checkbox"/> Hazardous waste |
| ✓ Resources consumption | ✓ Wastewater |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Atmospheric emissions |

ECONOMIC STUDY

Functional unit: 4900 l wine ~ 100 ha vineyard

Initial investment:
4 307 €

Annual expenditure:
1 821 €

CRITICAL FACTORS

- | | |
|------------------------------------------------|-------------------------------------------------|
| <input type="checkbox"/> Large investment | <input type="checkbox"/> Organisational changes |
| ✓ Improvement potential | ✓ Training needs |
| <input type="checkbox"/> Technological changes | ✓ Impact on wine quality |

Diatoma



ENVIRONMENTAL

- ✓ Energy consumption
- Water consumption
- ✓ Resources consumption
- Noise

ECONOMIC

Functional unit: 4 900 l

Initial investment:
7 425 €

CRITICAL

- Large investment
- ✓ Improvement potential
- Technological changes

ceous Earth

This equipment uses fossil earths as filtering material.

A precoat is placed on the filter holder through which fluid flows continuously. The filters consist of corrugated plates that support a mesh that retains the earths.

This technique is questioned regarding health issues, since dust generated during its running can affect the health of workers.

ENVIRONMENTAL

- Non-hazardous waste
- Hazardous waste
- Wastewater
- Atmospheric emissions

ECONOMIC

wine ~ 100 ha vineyard

Annual expenditure:
1 113 €

CRITICAL

- Organisational changes
- Training needs
- Impact on wine quality

Tangential



In this filtration the majority of the wine travels tangentially across the surface of the filter (membrane), rather than into the filter.

The main advantage of this technique is that a tangential filter can operate continuously at relatively high solids loads without blinding and, therefore, without losing performance.

Tangential filtration has a less adverse effect on the composition, colour and sensory characteristics of the wine.

ENVIRONMENTAL ASPECTS

- | | |
|--------------------------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> Energy consumption | <input type="checkbox"/> Non-hazardous waste |
| <input type="checkbox"/> Water consumption | <input type="checkbox"/> Hazardous waste |
| <input type="checkbox"/> Resources consumption | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Atmospheric emissions |

ECONOMIC STUDY

Functional unit: 4 900 l wine~ 100 ha vineyard

Initial investment:
24 785 €

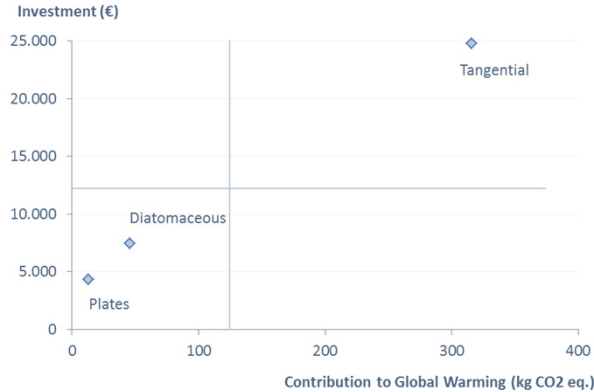
Annual expenditure:
198.22 €

CRITICAL FACTORS

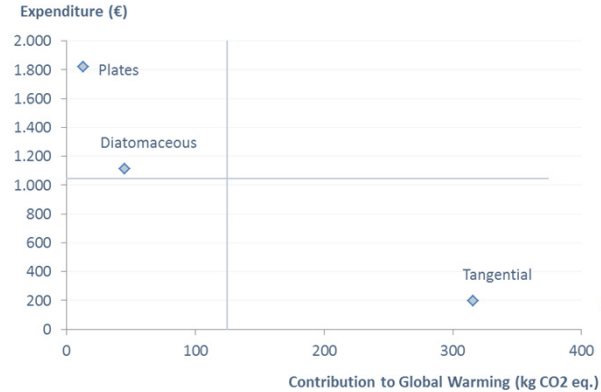
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|-----------------------------------------------------------|------------------------------------------------------------|
| <input checked="" type="checkbox"/> Large investment | <input checked="" type="checkbox"/> Organisational changes |
| <input type="checkbox"/> Improvement potential | <input checked="" type="checkbox"/> Training needs |
| <input checked="" type="checkbox"/> Technological changes | <input checked="" type="checkbox"/> Impact on wine quality |

Economic – Environmental Results

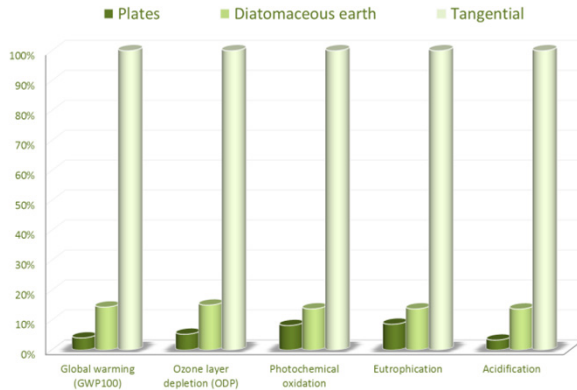
INVESTMENT - ENVIRONMENTAL LOAD



EXPENDITURE - ENVIRONMENTAL LOAD



ENVIRONMENTAL



PRIORITISATION

INVESTMENT - kg CO ₂ eq.	EXPENDITURE - kg CO ₂ eq.	TOTAL	RESULTS
3	2	5	TANGENTIAL
1	2	3	DIATOMACEOUS E.
1	2	3	PLATES