

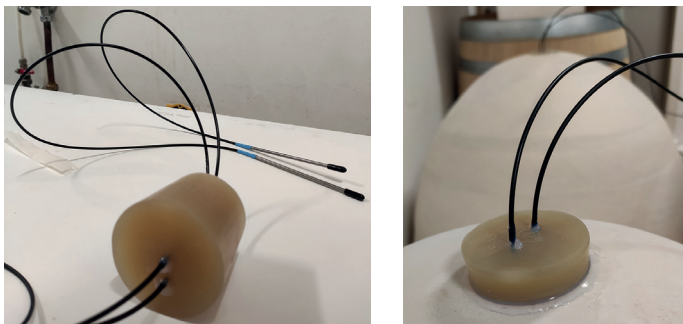
# Micro-oxygenation of ceramic containers

Fabrice Meunier from the AMARANTE PROCESS CENTER, carried out a study to measure the oxygen supplied to aged wine, in egg shape ceramic containers made by Biopythos.



Permeability measurements were carried out with the eggs from Biopythos, kiln fired at 1240°C / 2264°F and 1260°C / 2300°F.

The 225L ceramic eggs were filled with a solution model then were inerted by bubbling nitrogen, to achieve an oxygen concentration < 0.3mg/L.



Each egg was fitted with two dissolved oxygen sensors (from PyroScience), connected to a computer to continuously acquire and to record values for analysis.

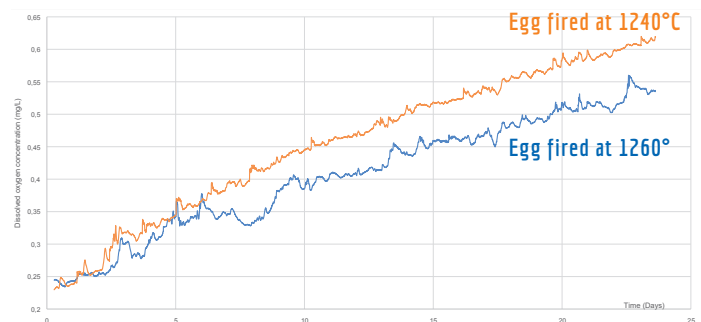
The eggs were placed in a temperature-controlled chamber at 20°C / 68°F during a follow-up period of



three months. The experiment was repeated several times to confirm the reliability of the tests.

Monitoring these oxygen measurements in the eggs over time, allow to calculate an overall permeability value from material equation transfer.

The egg fired at 1240°C / 2264°F shows an overall oxygen transfer in wine close to 4.7mg/L/year, versus 3.5 mg/L/year for the one fired at 1260°C / 2300°F.



Oxygen carried out of two eggs

In comparison, the oxygen transfer in wood barrels is around 13 mg/L/year

Oxygen permeability of wood barrels is estimated between 10 and 30 mg/L/year. This variability can be explained by different measurement methods and different wood barrel qualities.

Recent tests carried out at the SIVV (Science Institute of Vine and Wine) in Bordeaux, recorded such transfers with an innovating measurement device, at around 13mg/L/year (results to be announced in an upcoming publication).

The ceramic eggs from Biopythos are recommended to wine producers to age their wine :

- With controlled oxygen supply
- Without sensory impact of barrels
- Without using a complex micro-oxygenation method

More informations :

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