



VBUNG® Technology

No Added Additives and Preservatives

Maceration, Fermentation, Malolactic Fermentation and Aging under Continuous Pressure in Custom Wooden Barrels

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The speed of oxidation during maceration, fermentation, malolactic fermentation and aging is much faster than the process of winemaking itself which is a huge disadvantage and requires control using manly Additives and Preservatives.

The invention refers to a Totally New *VBUNG* ® *Technology* by applying:

<u>Isobaric Winemaking Process inside Custom Wooden Barrels</u> Giving Control Over Oxidation, Contamination, and Evaporation.

- 1. Positive pressure can be created naturally by CO2 during fermentation or artificially using any food-grade gasses allowed
- 2. Negative pressure can be created using a vacuum system

No added Additives and Preservatives Winemaking

Grapes + Custom Wooden Barrel + VBUNG ® Equipment



Custom Wooden Barrel:

- 1. Food Grade Silicone Rod Between Staves / Barrelhead
- 2. Reinforced Hoops With Bolts
- 3. Acrylic Barrel Head for Sunlight / Visual / Sensors



VBUNG Patented Equipment:

- 1. Safety Relief Valve / Spunding Valve
- 2. Adjustable Racking Filter / Sparger / Liquid Inlet and Outlet Port
- 3.O2/N2/CO2/Ar...etc. Food Grade Gasses Inlet and Outlet Port
- 4. Temperature / Pressure / Dissolved Oxygen ...etc. Sensors/ Wireless Sensors

Advantages

- 1. Sustainable Technology and Equipment without the use of Additives and Preservatives
- 2. Sustainable Mobile Winery in the vineyard with solar panels, sensors, and mobile data
- 3. Accelerated Winemaking and Aging technological process
- 4. Equipment Control over Oxidation, Contamination, and Evaporation
- 5. New or Old Wooden barrels can be used once custom modifications are done
- 6. Whole bunch, Juice, or Berries can be used
- 7. No Juice clarification is needed (No flotation, cold settling, or centrifugation)
- 8. No temperature or humidity control is required (Fermentation at high temperatures for white winemaking is not a problem)
- 9. Direct Sunlight for the whole technological process
- 10. No need for topping the barrels
- 11. Taking out wine samples for laboratory or tasting without oxidation, contamination, evaporation
- 12. Barrel regeneration with compressed O2 or Air before vintage
- 13. Extended lifetime for wooden barrels due to custom construction
- 14. Can be applied to making and aging Wine, Beer, Cider, Vinegar, and aging Spirits.
- 15. Reduced labor, time, and cost.
- 16. Global potential







