

# What is the natural state of wine?

## Introduction

The question about the **natural state of wine** goes right back to the quality of the grape on the vine, and the **state of the wine juice (85% water) in the grape**.

When a grape is attached to its living system, eg. the vine, the grape stores within its cells the *life-force* energy of its environment. This energy is held as a *memory* within the cell water of the wine juice (including the grape membrane or skin). That is, cell water in all living cells can receive, store, and transmit its *life force* information. The water within a living grape (attached to the vine) carries a **negative (-mV) charge**, and this negative charge is the **essence of all cell life**. The water in a grape or its grape juice is called structured water, due to its negative charge. This charge is sustained by the living vine that is anchored within the **negative charge of the Earth**.

The *life force energy in a grape* is a function of the living environment of the vine. This force is highly dependent on the naturalness of the environment. For example, an organic or biodynamic vine will have a **more heightened and expressive life-force energy than a chemically grown or treated vine**. Also, the naturalness or quality of a grape is highly dependent on the life force energy of the soil, the plant and its immediate environment, sunlight energy, and ultimately the life-force energy entrained from the winemaker and the environment of the winery.

When a grape is harvested (ie. taken from its living system), the charge in the cells of the grape change to a positive (+mV) charge within 60 hours after harvest. That is, the grape juice will turn to a destructured or unstructured water form. Consequently, the capacity of the wine juice to reach its full or **expressive potential** is lost, albeit that the information about the grape (its environmental qualities) are still stored in the memory of the cells. However, this information cannot be fully transmitted to the finished wine taste because the wine (85% water) carries a positive (+) charge.

However, the quality and integrity of wine can be significantly improved through restructuring the wine juice (80-85% water) with a MEA water device to hold a **permanent negative (-) charge**. In the case of wine making, this process can be undertaken prior to fermentation by passing the grape juice through a MEA water restructuring device (usually a 2") to the fermenters and through a device (usually a 1") during the bottling process to achieve **syntropy wine** (ie. *life-affirming wine that expresses its full quality or integrity and never decays to vinegar*)

## Background

Many people enjoy wine because the act of pouring wine into a glass is the point of relaxation at the end of a day or at the beginning of an event. The wine elevates the subtle flavours in a meal and brings depth and inhibition to the conversation. However, there is now a growing interest in drinking wine in its most natural state, without additives or chemicals.

There is recent science that points to the link between **electrical charge (current) in the mouth** and a person's capacity to differentiate tastes (flavours). Consequently, when the water in wine has a high negative charge (say above -250mV) then the different wine flavours will be sensed in a more **heightened** manner.

We often read in scientific and general articles that wine can be healthy. However, not all wines can be put into this category. For example, not all foods are healthy, and similarly not all wines are healthy. The health or integrity of a wine depends on the type of wine you drink, and more importantly how the grapes are grown and prepared for fermentation and bottling.

## Wine integrity

Most vineyards are sprayed with pesticides, herbicides, and fungicides to protect their crops from insects and infection. These chemicals absorb into the soil, the grapes, and ultimately into the wine. Grapes (particularly table grapes) are near the top of the *Dirty Dozen* foods sprayed with the most chemicals. You avoid these chemicals in your food by choosing organic produce, and similarly you should choose organic or biodynamic wines.

Grapes have a thin and porous skin, and this means they absorb the chemicals more readily through the skin membrane. Also, wine is the concentrate of many grapes (600-800 grapes per bottle) and consequently the result can be a condensed source of toxic chemical compounds if the grapes are sprayed with chemicals. For example, in a 2018 test for glyphosate (from the weed killer: Roundup) levels in wine grown in California (USA), it was found that 100% of the wine tested had glyphosate.

## Wine additives

Wine producers, globally, can use many different types of additives in wine without disclosing any of them on the bottle. The wine could include:

- defoaming agents and artificial colouring
- extra sugar, including high fructose corn syrup, and ammonia.
- genetically modified bacteria and yeasts that are either present on the grapes in a vineyard or added to the fermentation.
- Fining and clarifying agents like egg-white, casein or polyvinyl-polpyr-rolidone (PVPP), and sulphites, preservatives, and a lot more

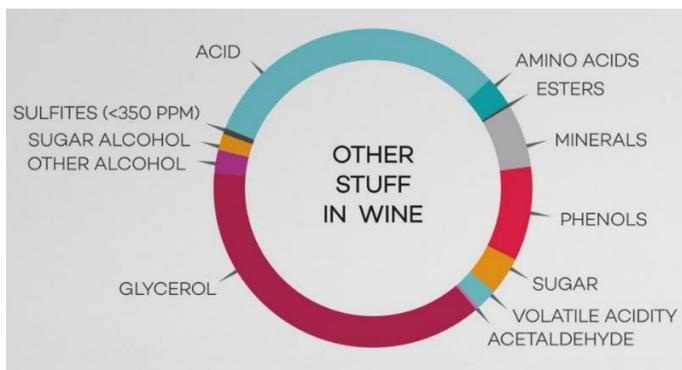
When we learn about the additives used in winemaking, we realise that there is minimal labelling or transparency in consumer awareness or education. Wine bottles may have some ingredients listed on the labels however many other chemicals are potentially not listed. A non-organic/biodynamic wine could have more than 20-30 additives. So, why do we passionately read the label for all foods we buy and only purchase items with organic, clean ingredients, and yet we do not pay adequate attention to what additives are in wine?

### Alcohol and sugar

Wines have varying concentrations of alcohol and sugar. This could vary for alcohol from approximately 12-14% and sugar can be as high as 300 g/L for a sweet wine. Human cells must metabolise these compounds because they are toxic to the cell, and therefore the higher the concentration the greater the time for metabolism. Therefore, it would be an advance in wine production if the wine could be made in a manner that reduced this toxicity risk yet enhanced the flavours and enjoyment.

### What is in traditional wine?

The image below illustrates the **non-water composition of most wine**, including the sulphite preservatives that have a capacity to form free radicals through oxidation.



The emergence or presence of acetic acid (vinegar) in wine is an indicator of wine spoilage. If wine is infected with acetobacter bacteria, and other conditions are right, then acetic acid will be produced in the wine, along with lots of other bacteria (eg. the gram-positive, lactic acid bacteria, *Pediococcus*). These bacteria are everywhere: in the air, on fruit, etc. When acetobacter gets into your wine it can slowly turn the alcohol into acetic acid, if left unhindered. Consequently, wine can turn into vinegar when it is exposed to a lot of oxygen and microbes in the air for a long time (within weeks, or months at most).

Certain health conditions, such as alcoholism and diabetes, can produce ketoacidosis and uncontrollable ketosis that leads to a sharp, and potentially fatal, increase in the acidity of the blood. Since acetone is a byproduct of fermentation, it is a byproduct of distillery.

## How to produce wine with integrity?

It is the dynamics of the energy in structured water that determines the degree of order or disorder in the crystalline structure of the water. In effect, this process is about turning the water in wine into a crystal liquid structure and this structure opens the pathway for water in wine to receive, store and transmit life affirming energy. This energy is usually described as either entropy (**entropic** or decaying structure) or non-entropy (non-entropic, life-affirming, or **syntrophic** structures). **Entropy** defines something that, left on its own over time, will gradually decline into **disorder**. This is the case when structured (syntropy) water is taken from a pristine, flowing stream and is stored in a container (eg. a bottle): it converts from a six-sided crystalline structure into a five-sided crystalline form (unstructured or de-structured) within 60 hours. Consequently, the urban water (and most other fluids) that human's drink on Earth (including bottled wine) is unstructured (entropy) water. **Syntropy** (non- or negative entropy) describes something which does not decay or decline, however when left on its own over time will progress or change into a state of higher function or **order**. For example, a solid crystal (including a diamond) will persist without decay.

**Phión has invented and produced water devices that will sustain syntropy in water.** This innovation has endless capabilities for sustaining cell potential in the modern era. Phión MEA water is: **SYNTROPY WATER**. It is our aim to facilitate **SYNTROPY WINE**. *Syntropy water in wine is the diamond in the wine.* Therefore, wine that has structured form (permanent negative charge) could be **on tap** in the same manner as beer in a bar. This would be a revolution in wine presentation and enjoyment, particularly if the wine were biodynamic or organic.

**The Phión** website for these water restructuring devices is [www.meawater.com.au](http://www.meawater.com.au). The MEA website provides the evidence of its advanced capacity for water conditioning and restoring the natural, permanent negative charge to water. The **Phión** MEA devices include: a portable **bottle top device** for home or travelling to condition water, wine, spirits, juices, and raw milk; an **under-sink/shower device** that can also be used on an outdoor tap and sprinkler, and 5 **in-line devices** ( $\frac{1}{2}$ ",  $\frac{3}{4}$ ", 1", 1 and  $\frac{1}{4}$ ", 2" and 4" inner diameter) for house connections and a broad range of agricultural/industrial applications. There is more information at [www.meawater.com](http://www.meawater.com)



Since 2012, all Phión liquid products ([www.phion.com.au](http://www.phion.com.au)) have been produced with structured water.

## Advances in wine making.

In recent times winemakers have been practicing a fermentation technique known as *indigenous yeast fermentation*, and this is the manner that wine was originally made. It has only been in the past 100 years that *packet* (non-indigenous) yeasts have been added to the fermentation process. So why has this technique become the new era in wine making? Undoubtedly, there is a trend towards a more natural way of making wine which starts in the vineyard with organic or biodynamic grape growing (ie. the biodynamic wines from Whistling Kite, Loxton SA, [www.whistlingkitewines.com.au](http://www.whistlingkitewines.com.au) and the Kalleske vineyard that has been certified since 1998 and is the oldest certified organic and biodynamic vineyard and winery in the Barossa Valley: [www.kalleske.com](http://www.kalleske.com)) and extends to minimal handling of the wine. The Whistling Kite Winery uses the Biodynamic Farming Practices and has found the vine structure changes during the growing period. The use of the BD501 formulation produces a strong, thick skinned berry that is naturally resistant to disease and fungal challenges. Of course, there are many other wineries that have adopted similar organic or biodynamic practices in Australia and overseas.

The use of wild yeast is one factor in wine quality and integrity, however there are many other techniques that will help in this process. The use of diverse and abundant wild yeast cultures is a tool to create complexity, however the fermentation of the wine in a structured water form enhances flavour, prevents spoilage, and ensures that the wine will never turn to vinegar.

Whistling Kite Wines commenced using a Phi'on MEA 2" water device in 2017 to water the vineyards and then installed a 2" device to treat the wine juice prior to the fermenter. Then in December 2020 they installed a ¾" device treat the wine prior to bottling. In early 2021, Phi'on received the following email testimonial from Whistling Kite Wines (SA):

***AB here from Whistling Kites Winery, just wanted to drop you a quick line with some interesting results. Last vintage, I dipped my toes in the water (wine?) of making it myself and processed approximately 200 litres of wine at a different facility than usual. I wanted a little more control over the process, and made the wine with no additives, no preservatives, just grapes. As you know, our winery has been using the Athena ¾ MEA Device for a couple of years now, but they have never had a control to compare it to. Therefore, that is what I did, and on December 28th, I bottled the first ¾ batch through the Athena, and the remainder without. I have to tell you, I am glad I did the bulk of it through the MEA device, the difference is quite evident. The wine that ran through the unit is where you would expect the wine to be after 18 months. It is a lot more vibrant, and lively (there is even a difference visually!). It is almost as though the MEA device has eliminated bottle shock. Finally, a friend tested a sample of both on his radionics machine to measure the vitality and got a reading of 1300 vs 750! I know this is probably old news to you, but I wanted to share it, I will be bottling all of my wine through the MEA unit in the future: Cheers, AB from Whistling Kites Winery.***

## What defines a structured water wine?

The key areas that differentiate the Phi'ón MEA water devices in the structured water and wine market are:

1. The simplicity of design, operation, and installation (install and forget). There is **no ongoing maintenance**, except the bottle top device may need a change of the inner washer every 2-3 years depending on usage, however this process is simple and Phi'ón provides spare washers.
2. The water produced from these devices will **hold a permanent negative charge** (ie. a syntropy force). Phi'ón has checked this capacity in numerous experiments with water and wine. Wine that is restructured will never oxidise (ie. lose oxygen and turn to vinegar). These results clearly demonstrate that the MEA water has a **natural preservative capability**.
3. The cost to buy and sustain the device is **highly competitive and value for money**. This is significant given that water from the device will hold a permanent negative charge and produce significant results in food production and food integrity.
4. Phi'ón structured water will **eliminate pathogenic microbes** like E. coli.
5. Phi'ón structured water has a **natural bonding with microbes in the processes of digestion, absorption and assimilation of nutrients and elimination** of cellular waste.
6. Phi'ón structured water has been proven in independent measurements to **receive (entrain), store and transmit natural wave energies** (eg. Quantum Code Technology: QCT) that will reduce cellular stress levels to a normal range in about 2 minutes.

## Phi'ón research findings

The manufacturing of the Phi'ón water restructuring devices has reached a mature stage, along with its broad application for domestic, agricultural, and industrial uses.

Wine is about 80-85% water and therefore this water can be restructured to permanently hold a negative charge. This is innovation for sustainable wine making. There are several notable and positive outcomes from using the Phi'ón bottle **top device to condition wine**. For example, trials with wine have produced significant results that include:

1. Greater balance in wine structure (ie. increased sense of flavours and aroma is intensified)
2. Considerably less tannin and sharpness (acidity) taste that can dominate **flavours**.
3. Potentially enhances the beneficial aspects of polyphenols.

Therefore, the Phi'ón in-line, MEA water conditioning devices will become increasingly used to water grapevines (and deliver nutrients and biology to the grapevines through fertigation) and restructure the water in wine before fermentation and bottling. The value to the wine producers and makers, is that the wines will not spoil, storage will not adversely affect the wine and flavours/bouquet will be enhanced. The value to the wine consumer is that the wine

alcohol will be more effectively processed by the liver to minimise ketosis and blood acidity. Also, an MEA water device will restore wine to near pristine state once it has begun to oxidise and turn to vinegar.

## Conclusion

There are now 1000's of people globally who are converting their traditional, bottled wine into **syntropy wine**, and noticing a massive difference in the wine experience, along with its storage time in the wine flask.



**The wine does not oxidise or turn to vinegar when left open to the air for up to 12 months.** This is largely due to permanent negative (-) charge held in the wine that eliminates pathogenic microbes that can spoil the wine. Also, the restructuring of the wine to a unique six-sided crystalline structure prevents the loss of oxygen.



At Phi'on we are encouraging wine growers, wine makers and wine drinkers to experience the difference in water once it has a permanent negative charge in the wine water. A good starting point is to try the bottle top device (see image above) and do a before and after, taste test. The change in experience (increased flavours and wine smoothness) can be immediate, however **the wine will heighten its quality over hours to days, when left, open to the air in a wine flask.**

Wine in this state has a heightened life-energy that adds to the experience. Also, wine in this state is about as close as you will get to wine naturalness. **Aged and more complex wines** will take on a whole new experience, especially when left in an open flask for 24-48 hours before drinking. However, while the research and experience in the application of this innovative technology to grape and wine production is in the early stages, the early results are encouraging; not only for organic and biodynamic growers, but for traditional wine makers who will want to gain an edge in the market with more *expressive* wines.

Enquires are welcome at [info@meawater.com.au](mailto:info@meawater.com.au). Robert Gourlay, Chief Scientist, Resonate Research Pty Ltd (0418 462 443).