#### 6. RESEARCH AND USE OF THE WINE

### 6.1 Research, scientific resources, Pasteur and enology schools

Wine is born from grape and gets shape through its juice fermentation at the agricultural tavern, to the satisfaction of those who are going to appreciate and taste it. On personal product analysis the senses of view, smell, and taste that reveals flavor, odor, and the several aromas and perfumes are the most important factors. However, research does not stop here.





The chemical composition of a wine depends on many factors: genetic, environmental, technological, and also the course of fermentation and yeast nature.





### 6.1 Research, scientific resources, Pasteur and enology schools

Man knew the alcoholic fermentation since the most remote ancient times. Helmont and Stahl made the first scientific studies on fermentation, beside Lavoisier gave the outset to the study of alcoholic fermentation chemistry. Leeuwenkoek. Further, L.J.Thénard discovers that the ferment was an azoted substance.









Liebig published a theory that was quite common with that of Thénard. Gay-Lussac examining gases in the recipients found that oxygen was quite scarce, if no absolutely absent, because oxygen should be fermentation cause.





From Pasteur studies, demonstrating that alcoholic fermentation is a living unicellular organism and from A.J.F.da Silva studies, we have passé d through a radical transformation of methods of study on wine chemistry.

An appliance used to determine wine alcoholic degree by an analytical, fast, and quite precise method, at a high ebullition temperature of hydro-alcoholic mixture.



Malfigand ebulliometer, shown on the postmark

# 6.1 Research, scientific resources. Pasteur and enology schools

Louis Pasteur, the greatest French scientist, carried out experiments in Montigny-les-Arsules village, next to Arbois, a region that produces the best wine of Jura. In 1878 he purchased a property in such village where he cultivated vines and carried out his experiments on grape fermentation.

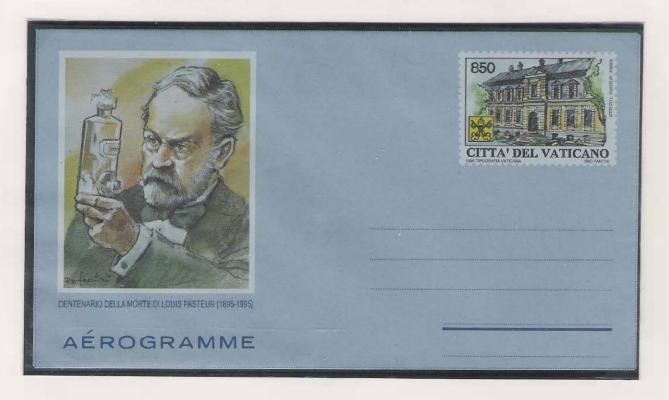




He discovered the fermentation is caused by the presence of living micro-organisms. On fermentation, there is a great loosening of energy in the transformation of sugar into alcohol and carbonic gas. The amplification of these studies was great importance to fermentation industry (vinegar, etc) and other industries by the introduction of pasteurization (sterilization).



A statement ascribed to Pasteur: "The wine is the most healthy and hygienic of all drinks"



## 6.1 Research, scientific resources, Pasteur and enology schools



Louis Pasteur (Dec.27,1822-Sept.28,1895) was born in Dôle, in Jura. Starting from pure chemistry, he became one of the greatest biologists, one of the most important natural scientists industry fomenter, and humankind benefactor. His contribution to wine industry was enormous.



Enology School at Avelino, It.



Death centenary

### 6.1 Research, scientific resources, Pasteur and enology schools

Wine-producing industry development with the adoption of top technology is increasingly requesting the concourse and presence of enologists specifically graduated to this end. Enology schools keep covenants with taverns, experimental stations and several research institutions in the whole world, besides keeping chemistry, enology, physics well equipped laboratories, as well as specialized libraries.



German Institute of Wine , Mainz, Germany



Universal Vintage Monument, in Requena (Spain)

The several institutes spread through wine-producing world are economic coordination organisms with special functions.



Badisches Institute of Winegrowing at Freiburg (free franking)

#### 6.2 The nutritional and medical use

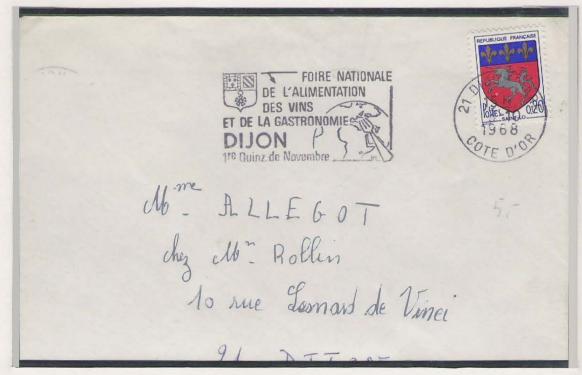
As it was pointed out, wine does not constitute an essential aliment to human life, however, it acquired an important place on feeding and festive habits.





Wine through time, has been used as an aliment and, as a medicine. Science has studied the effects of wine searching turn wine a healthy beverage and useful to human life.





### 6.2 The nutritional and medical use

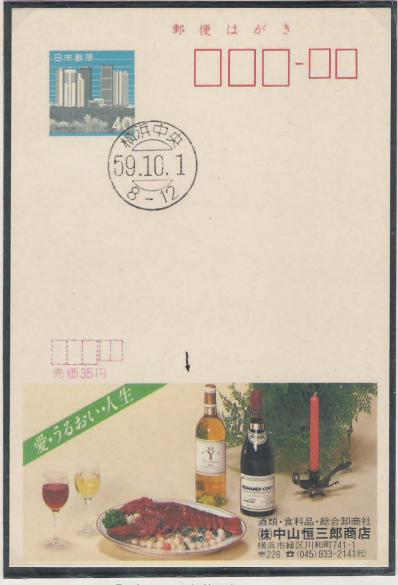
In antiquity, the wine was presented as aliment, medicinal product or addiction. Wine is a classical nutrient mainly by alcohol that contains, which gives a power energy.







Wine as medicine



Food accompanied by wine



...gather thy wine...

No other food supplies, se pleasant, organic and mineral substances which constitute it.



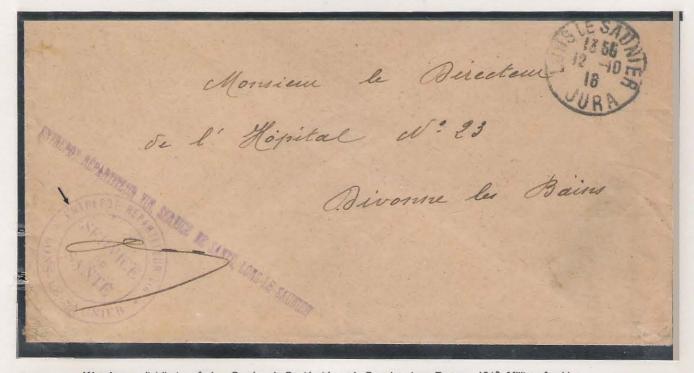
World food day

### 6.2 The nutritional and medical use



Reprovisioning service of wine at Place de Cette, Saint Maur des Fosses, France, 1916. Military franking.

The nutritional use of wine was very common among the military forces in the course of the war.



Warehouse distributor of wine, Service de Santé at Lons le Saunier, Jura ,France , 1918. Military franking.

### 6.3 The fight against alcoholism

Wine in moderation is an integral part of our culture, heritage and gracious way of life. Wine, although a healthy beverage, it contains alcohol. Drunkenness brings itself lamentable physical, intellectual, and moral disturbances.



Alcoholism is a set of phenomena more or less pathological resulting from the use of alcohol as a beverage. Alcohol abuse is always prejudicial, that is why there are fights and campaigns against its abusive use.









Abstinence from alcoholic beverages is the key recommended on the meter cancellation (USA, 1944)

### 6.3 The fight against alcoholism

The medical virtues of the wine, recognized at all times, in principle are due to alcohol, because the ethanol has pharmacological properties proven as: tranquilizer, anesthetic, vasodilator, disinfectant, diuretic, energetic action, having pleasant flavor and low cost.

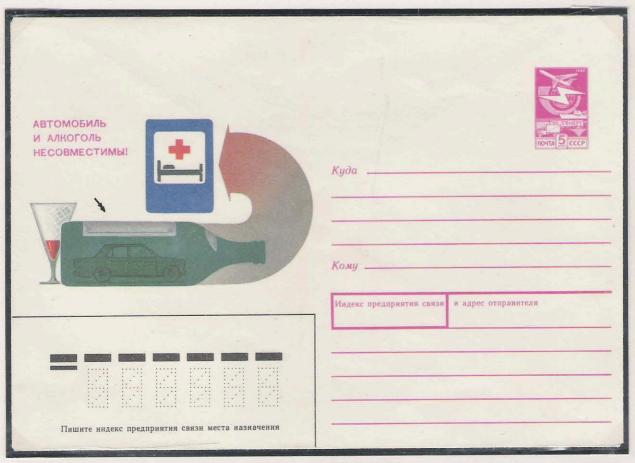


The usefulness of the alcohol to alleviate the anguish of the human being is the drug most used in the world and the oldest experience of humanity.



Sobriety of each one ensures the safety of all

As any drug alcohol presents certain risks, and, therefore the wine must be used as moderation The alcohol causes difficulties for thinking, discern or take decisions and reduces substantially the reflexes. Let the beverage after to drive.



... and no put the car within the bottle!

# 6.3 The fight against alcoholism



XXV International Congress against alcoholism, in Istanbul

Wine through time has been used as an inebriating beverage. Medicine has studied the physiologic effects of wine and searched through campaigns, prevention, abstinence, moderation, and encouraged the fight against alcoholism.



Fight against the alcohol, in Brazil





Temperance envelope. All-around printed information about the evils of alcohol. (USA, 1852)