V

(Announcements)

OTHER ACTS

EUROPEAN COMMISSION

Publication of a communication of approval of a standard amendment to a product specification for a name in the wine sector referred to in Article 17(2) and (3) of Commission Delegated Regulation (EU) 2019/33

(2022/C 143/09)

This communication is published in accordance with Article 17(5) of Commission Delegated Regulation (EU) No 2019/33 ([1]).

COMMUNICATION OF STANDARD AMENDMENT MODIFYING THE SINGLE DOCUMENT

'Σαντορίνη' (Santorini)

PDO-GR-A1065-AM01

Date of communication: 31 January 2021

DESCRIPTION OF AND REASONS FOR THE APPROVED AMENDMENT

1. **In the production of dry white wine with the Santorini PDO, the minimum content of the grape variety Assyrtiko has been increased from 75 % to 85 %**

The increased percentage of Assyrtiko improves the quality of the wine produced. Specifically, it produces very concentrated white wines, with delicacy and minerality of character. The Vinsanto wines made from raisined grapes, mainly Assyrtiko, are rich, complex and intense. The improved quality, and the various demands of today's market, has led more winegrowers to use Assyrtiko in ever larger quantities. In the majority of cases, it exceeds 90 %. Furthermore, all the newly planted or restructured vineyards on Santorini are mono-varietal, the vast majority being Assyrtiko.

The chapters on 'Oenological Practices' and 'Authorised Grape Varieties' have been amended.

2. **The maximum yield of vineyards for the wine with the Santorini PDO has been reduced from 8 000 kilograms per hectare to 6 500 kilograms per hectare**

Grape production statistics from recent years show that the average vineyard yield is around 3 000 kilograms per hectare and that, with modern wine-growing practices, the maximum yields do not exceed 6 500 kilograms per hectare. In order to protect and improve the product, it is necessary to adapt the maximum yield per hectare in light of the new data, and to reduce it to 6 500 kilograms per hectare.

The chapter on 'Maximum yield(s) per hectare' has been amended.

([1]) OJ L 9, 11.1.2019, p. 2.

3. **The sugar content of the dry white wines with the Santorini PDO must not exceed 4 grams per litre, or 9 grams per litre under certain conditions.**

The sugar content of dry white wines with the Santorini PDO has been brought into compliance with Part B of Annex III to Delegated Regulation (EU) 2019/33. Specifically it does not exceed '4 grams per litre, or 9 grams per litre, provided that the total acidity expressed as grams of tartaric acid per litre is not more than 2 grams below the residual sugar content'. The exceptionally low pH of the wines with the Santorini PDO often results in wines that are unbalanced on tasting. The sugar content proposed, with the condition stated above, creates a successful balance of sugars and acidity.

The chapter on 'Description of the wines', specifically the part on 'Analytical and organoleptic characteristics of the dry white wine' has been amended.

4. **The form of the traditional term 'Νυχτέρι' in Latin characters has been replaced by 'Nykteri'-'NYKTERI'**

Article 13 of Ministerial Decision No 235309/7.2.2002, approving traditional terms for wines, (Government Gazette, Series II, No 179/19.2.2002), lays down the conditions for using the traditional term 'ΝΥΧΤΕΡΙ-Nykteri' for dry white wines with the 'Santorini Superior Quality Designation of Origin Santorini'. The amendment brings the product specification into compliance with national legislation.

The chapter on 'Applicable requirements', specifically the section on 'Traditional terms', has been amended.

5. **Words deleted from the chapter on oenological practices**

In the chapter on oenological practices for dry white wine, the following description of a vinification method has been removed: 'produced by means of pre-fermentation crushing, followed by settling and inoculation with pure selected yeasts which express the aromatic typicity'. It has been removed as it does not represent a specific oenological practice.

The chapter on 'Oenological practices' has been amended.

6. **Updating of the Santorini PDO technical file**

In the context of updating the technical files, the following changes have been made to the product specification:

i) the link to the geographical area for liqueur wine from raisined grapes has been combined with the link to the geographical area for naturally sweet/raisined wine as there is no difference between them;

ii) national provisions have been added and replaced on the requirements and controls applicable for PDO and PGI wines;

iii) the details of the competent control authorities have been changed.

The chapters on 'Link to the geographical area for naturally sweet/raisined wine' and 'Link to the geographical area for liqueur wine from raisined grapes' have been combined.

The chapters on 'Applicable requirements' and 'Details of control authorities and bodies' have been amended.

SINGLE DOCUMENT

1. **Name(s)**

Σαντορίνη (Santorini)

2. **Geographical indication type**

PDO - Protected Designation of Origin

3. **Categories of grapevine product**

1. Wine

3. Liqueur wine

15. Wine from raisined grapes

4. **Description of the wine(s)**

1. *Dry white wine*

CONCISE TEXTUAL DESCRIPTION

Appearance: bright greenish yellow colour.

Aroma: complex nose with aromas of citrus fruits, notes of orange and lemon peel and characteristic steely back-notes.

Taste: rich tasting with balancing acidity giving structure, ensuring a fresh aftertaste.

Minimum natural alcoholic strength: 12 %

Minimum total alcoholic strength: 12 %

Total sugar content: Total sugar content: 0-4 grams per litre, or up to 9 grams per litre, provided that the total acidity expressed as grams of tartaric acid per litre is not more than 2 grams below the residual sugar content.

Regarding maximum total alcoholic strength, the values provided for in the relevant EU legislation apply.

General analytical characteristics	
Maximum total alcoholic strength (in % volume)	
Minimum actual alcoholic strength (in % volume)	12
Minimum total acidity	5,5 in grams per litre expressed as tartaric acid
Maximum volatile acidity (in milliequivalents per litre)	18
Maximum total sulphur dioxide (in milligrams per litre):	200

2. *Liqueur wine from raisined grapes*

CONCISE TEXTUAL DESCRIPTION

Appearance: orange-yellow with gold tints which deepen to brown with ageing. In wines that undergo a long ageing, the colour deepens to shades of reddish brown.

Aroma: intense and complex aroma, with notes of spices, honey and raisins and subsequent notes of lemon blossom. During ageing, the aromas become more intense and complex.

Taste: taste effectively balanced with the acidity of the grape variety. A rounded, velvety wine, rich with notes of honey and lemon. The aftertaste is especially long and aromatic.

— Minimum total alcoholic strength: 21 % volume

— Maximum actual alcoholic strength: 22 % volume

— The maximum permitted sulphur dioxide content is 400 milligrams per litre for sweet wines produced from raisined grapes with a residual sugar content, expressed as sugar, equal to or more than 45 grams per litre (in accordance with Part B of Annex I to Commission Delegated Regulation (EU) 2019/934).

General analytical characteristics	
Maximum total alcoholic strength (in % volume)	
Minimum actual alcoholic strength (in % volume)	15
Minimum total acidity	5,5 in grams per litre expressed as tartaric acid

Maximum volatile acidity (in milliequivalents per litre)	30
Maximum total sulphur dioxide (in milligrams per litre):	400

3. *Naturally sweet white/raisined wine*

CONCISE TEXTUAL DESCRIPTION

Appearance: orange-yellow with gold tints which deepen to brown with ageing.

Aroma: intense and complex aroma, with notes of spices, honey and raisins and subsequent notes of lemon blossom.

Taste: sweet taste effectively balanced with the acidity of the grape variety. A rounded, velvety wine, rich with notes of honey and lemon. The aftertaste is especially long and aromatic.

— Minimum natural alcoholic strength before raisining: 15 % volume

— Minimum natural alcoholic strength after raisining: 21 % vol.

— Minimum total alcoholic strength: 21 % volume

— Regarding maximum total alcoholic strength, the values provided for in the relevant EU legislation apply.

— The maximum permitted sulphur dioxide content is 400 milligrams per litre for sweet wines produced from raisined grapes with a residual sugar content, expressed as sugar, equal to or more than 45 grams per litre (in accordance with Part B of Annex I to Commission Delegated Regulation (EU) 2019/934).

General analytical characteristics	
Maximum total alcoholic strength (in % volume)	
Minimum actual alcoholic strength (in % volume)	9
Minimum total acidity	5,5 in grams per litre expressed as tartaric acid
Maximum volatile acidity (in milliequivalents per litre)	30
Maximum total sulphur dioxide (in milligrams per litre):	400

5. **Wine-making practices**

5.1. *Specific oenological practices*

1. Production of dry white wines

Restrictions pertaining to vinification

Dry white wine with the Santorini PDO is made from at least 85 % Assyrtiko grapes. The remaining percentage is made up of Aidani and Athiri grapes. The classic vinification method for white wine is used. The temperature during alcoholic fermentation must not exceed 20 °C.

2. Production of liqueur wine from raisined grapes

Restrictions pertaining to vinification

Liqueur wine from raisined grapes with the Santorini PDO is made from naturally sweet/raisined wine with the addition of:

— neutral alcohol of vinous origin, including alcohol obtained from the distillation of dried grapes, having an actual alcoholic strength of not less than 96 % vol.;

— wine or dried grape distillate, having an actual alcoholic strength by volume of not less than 52 % vol. and not more than 86 % vol.;

— products of the two above with the addition of must of raisined grapes of the same varieties used to make the naturally sweet wine;

— spirit distilled from wine having an actual alcoholic strength by volume of not less than 52 % vol. and not more than 86 % vol.;

— raisin spirit having an actual alcoholic strength by volume of not less than 52 % vol. and not more than 94,5 % vol.

The aforementioned products are added by 31 May of the year immediately following the year of production.

3. Vine training systems

Cultivation method

The vines are trained using the traditional gobelet forms of Santorini, coiled gobelet, also called crown-shaped, and gobelet with hooped and straight canes.

4. Naturally sweet/raisined white wine

Restrictions pertaining to vinification

The naturally sweet/raisined white wine with the Santorini PDO is made from at least 51 % grapes of the Assyrtiko variety. The remainder is made up of grape varieties Aidani and Athiri with small amounts of 'foreign' white varieties traditionally grown on the island group of Santorini and Thirasia. Specifically these varieties are Gaidouria, Katsano, white Moschato, Monemvassia, Platani, Potamissi and the red variety Roditis. The grapes are harvested when overripe and left in the sun to partially dry out. Before raisining, the sugar content of the grape must is at least 260 grams per litre. After raisining, it is 370 grams per litre. The sugars and alcohol in the finished wine derive entirely from the vinified grapes. The addition before, during or after fermentation of the following is not permitted: concentrated grape must, rectified concentrated grape must, alcohol and products of distillation.

5. Specific oenological practices used to make the wines

Specific oenological practice

— In order to use the indication 'Επιλεγμένος' or 'Réserve' for dry white wines with the Santorini PDO, the wines must have undergone a total ageing process of at least 1 year, of which at least 6 months must be in oak barrels and 3 months in the bottle.

— In order to use the indication 'Ειδικά Επιλεγμένος' or 'Grande Réserve' for dry white wines with the Santorini PDO, the wines must have undergone a total ageing process of at least 2 years, of which at least 12 months must be in oak barrels and 6 months in the bottle.

— For Vinsanto wines, that is 'naturally sweet/raisined wine' or 'liqueur wine from raisined grapes', there is a minimum mandatory period of 24 months for oxidative ageing, which occurs while the wine is in oak barrels. The entire oxidative ageing period, however many years it lasts, occurs exclusively on the islands of Santorini and Thirasia.

The indications of ageing of Vinsanto wines are indicated:

— 'Vintage [year]', means that the grapes were harvested exclusively in the year stated, and the minimum requirement for 2 years oxidative ageing has been met.

— 'Aged for x years', where x refers to the number of years of minimum optional oxidative ageing, established at 4, 8, 12, 16, etc., with 4 years between them.

5.2. *Maximum yields*

1. Maximum yield in hectolitres of end product per hectare

50 hectolitres per hectare

2. Maximum yield in kilograms of grapes per hectare

6 500 kilograms of grapes per hectare

6. **Demarcated geographical area**

The demarcated production area for PDO wines covers the islands of Santorini and Thirasia.

7. **Main wine grapes variety(ies)**

Aidani Aspro B

Athiri B

Assyrtiko B

Gaidouria B

Katsano B

Monemvassia B - Monovassia, Monomvassitiko

Moschato Aspro B

Platani B

Potamissi B

Roditis Rs - Alepou

8. **Description of the link(s)**

8.1. *Quality-related, historical, cultural and social link and geographical environment of the white wine*

Quality

The vineyards of Santorini are among the oldest in the entire world, dating back to prehistoric times. The tradition of viticulture has existed for at least 3 500 years. The unique climate, together with the soil composition, mean that the grape varieties used in vinification produce wines of outstanding character. Descriptions of 19th century travellers tell of the outstanding organoleptic characteristics of the wine. These characteristics are due to the effect of the natural environment on the grapes and, by extension, on the wines of Santorini. At that time, the wine of Santorini was highly sought after abroad. Given its high alcoholic strength, for many years it was sold to fortify wines from other areas that were low in alcohol.

In addition to their historical significance, the vineyards are notable today for producing unique, high quality wines which, as they age, give expression to the very soil of Santorini, to that unique terroir of the island's vineyards.

These days, wine producers put the local grapes to best use, honouring their organoleptic characteristics. They produce quality wines, recognised in international competitions, both in Greece and abroad.

In order to safeguard the link between the wines of the Santorini PDO and their quality, every year the wines are subjected to organoleptic examination by an established committee. Wines which do not comply with the relevant specifications cannot be made available as Santorini PDO wines.

A study by the Agricultural University of Athens showed that the wines of Santorini were especially rich in bioactive phenolics, owing to the unique training method that uses the traditional basket-shape. This characteristic vine-cultivation method has been employed in Santorini since antiquity, and is wholly consistent with the other features of cultivation, as follows: I) the characteristic soil, which is sandy, a mixture of pumice and ash, rich in magnesium, calcium and iron, with significant capacity to absorb water; II) the Mediterranean climate with mild winters and cool summers, when the sea breezes from the north cool the vineyards; and III) the significant difference in temperature between day and night, together with the sea-mist that descends on the vineyards, keeping the vines cool and protecting them from the strong sunshine, benefitting the development of the grape quality.

8.2. *Quality-related, historical, cultural and social link and geographical environment of the white wine*

Historical link

On the trail of the wine-making tradition of Santorini, we journey back in time to the third millennium BC. In the excavations of Akrotiri, finds such as charcoal from vine wood and bunches of grapes as decorative motifs in vase-painting of the time show that wine-growing was one of the main activities of the population. The prehistoric vineyards were destroyed by the great eruption of the volcano, around 1650 BC, which obliterated all trace of human and plant life from the island for some three centuries.

Viticulture and wine production must have been a major component of the economy of Akrotiri at the time of its destruction. This is confirmed by the physical presence of charcoal from vine wood and grape pips, and also by the special system for treading the grapes and collecting the must. The treading trough and vat below are essential equipment. A large basket full of lime, which was found in the treading trough, led archaeologists to think that lime could have served as a type of filter for clearing the must.

The wine was stored in large *pithoi* (jars) which were sealed with wax. Indeed, on the neck of such a vessel, symbols scratched in Linear A script have been recognised as referring to wine. In general, the multiplicity of storage vessels, along with the stirrup jars, found in Akrotiri suggest not only significant wine production, but also a developed trade in wine. Bunches of grapes were used as decorative motifs in vase-painting of the time. There is evidence for wine-making and trade in wine in the form of certain types of vessels with spouts close to their narrow bases, as well as the multitude of stirrup jars: pots designed primarily for transporting liquids. Santorini has thus far furnished at least 50 % of all examples of this early type of vessel found in the Aegean region.

According to Herodotus, the Phoenicians were the first settlers following the catastrophe. They, and those who followed, had to cope with an extreme environment in order to survive. In order to meet their nutritional needs, they tried cultivating different species of plants which they brought with them and with which they were familiar. Only the vine succeeded in surviving through the centuries in Santorini's hostile environment. It is an adaptable plant and especially resistant to the hot and dry conditions of the island, with a sturdy and well-developed root system that penetrates the soil of Santorini. *Aspa* is the name used by local people for the hard and compact soil formed from multiple layers of volcanic material: ash, lava, pumice and debris. This *aspa* covered the limestone and slate subsoil in the course of successive volcanic eruptions. Centuries of human toil are stamped on the island landscape and bear witness to the efforts of the people of Santorini throughout the ages to dominate their land.

From the archaic and classical periods, we do not have direct evidence of vine cultivation. But it would be strange if the inhabitants of Santorini did not practise it in such ideal ground. It is difficult to imagine the presence of rich landowners on Santorini if they were not growing a product that would bring them large profits. And, to date, such a product has proved to be none other than wine.

From the 12th to the 17th century, the Venetians ruled the island of Santorini. From the outset, Europeans appreciated Greek wines, not only for their quality, but also because they could withstand long sea voyages. Therefore, Frankish and Venetian ships began carrying ever more wine from Santorini. The golden age for the wines of Santorini under Venetian rule would come to an end with the final conquest by the Turks. The wines had had an extraordinary career, with illustrious moments, such as their fame in Paris.

8.3. *Quality-related, historical, cultural and social link and geographical environment of the white wine*

Cultural, social and economic links

Vines and wine have been inseparably linked to the cultural, social and economic lives of the people of Santorini since ancient times.

Santorini has always combined great productivity with quality and an outward-looking disposition. Under Turkish rule, the lack of extensive croplands meant that Muslim populations did not settle. The people of Santorini organised their communities democratically and, taking full advantage of the peace that reigned in the Aegean following the Ottoman conquest, they developed trade and shipping, as in prehistoric times. Alexandria, Taganrog and Constantinople were the most important centres for the export of large quantities of wine from Santorini. It is known that, historically, there were exports to Russia from at least 1786. Indeed, the economy of Santorini declined when exports to Russia stopped on account of the October Revolution.

Evidence of the island's ancient past is preserved today in the archaeological sites of Akrotiri and Mesa Vouno, in the archaeological museums of Santorini and Athens, and in the Gyzi Megaron Cultural Centre. Indeed, the entire island, with its caldera, volcanic rocks, traditional settlements, towers and caves, is a monument to living history.

These days, we find wineries with hi-tech equipment, fully dedicated to the production of quality wines.

This cultural, social and economic link has been confirmed in recent years by a series of events on the island, such as the Ampelos ('Vine') symposia. Santorini was selected as the venue for these international vine symposia as, apart from being among the world's most beautiful and unique places, it has a 3 500 year tradition of vine cultivation and wine production. This tradition has been nurtured by the unique eco-system of this volcanic Aegean island.

The aim of the first symposium, 'Ampelos 2003' (5-7 June), was to make a material contribution to establishing the correct orientation for wine-growing in Greece, and to give wine-growers as many 'tools' as possible for modern and efficient viticulture. The symposium organisers invited viticulturalists, wine-makers, experts, researchers and business executives in the sector to share their knowledge and views on the subject. They were also invited to enjoy the rich social programme of the symposium in the perfect environment: the famous island of Santorini!

The aim of the second symposium, 'Ampelos 2006' (1-3 June), was to present the latest scientific and technical developments to participants, along with the latest market news. This provided an opportunity for fruitful discussion among experts from all over the world, together with representatives from the wine industry, wine journalists and oenophiles who attended the symposium. A basic objective of the symposium was to evaluate the combination of soil, climate and grape variety in the case of each vine, and to consider how to make best use of the raw material using the entire range of wine-making techniques. This would contribute to developing the specific, desirable aromas, along with the taste, of the wines of each region. Finally, special attention was given to the market strategies that could be adopted.

The third international symposium, 'Ampelos 2013', took place on Santorini on 30 and 31 May 2013. The objectives were: developments in viticulture adapting in the context of climate change; progress and innovation in wine-making; new strategies for promoting wine products in the new economic conditions which had come into effect at global level; and new trends in implementing good practice in viticulture and wine-making.

The theme of the fourth international 'Ampelos' symposium (12 to 14 May) was 'The Mediterranean vineyard and climate change'. The presentations confirmed the significant effect of climate change, and especially the increase in average atmospheric temperatures, on the phenolic development, physiology and ripening periods of the grapes. It was noted that, over the last 40 years, a trend has been observed in European vineyards. Depending on the region and grape variety, budburst, flowering and ripening of the grapes has been occurring 2 to 3 weeks earlier. Meanwhile, the grapes are ripening fully at much higher temperatures. The main climate parameters are temperature, rainfall and sunlight. It was pointed out that, regardless of the predictive models for those parameters, the European vine and wine map will change significantly. Change will affect both the pattern of grape varieties, and the structural elements of the map. The outcomes will be rather negative for the quality of wines, especially those made from white grape varieties.

8.4. *Quality-related, historical, cultural and social link and geographical environment of the white wine*

Geographical environment and geographical origin

In the production area for wines with the Santorini PDO, vineyards cover around 12 000 stremmata. Starting at sea-level, they extend to terraces up to 300 metres in height.

The region has a typical Mediterranean climate with strong sunshine, hot and dry summers and mild winters. The average annual maximum temperature is 23 °C, while the minimum is 14 °C. The total annual rainfall averages between 250 and 370 millimetres.

Santorini is mostly formed of deposits of local soil from the Tertiary period, pumice and lava. The soil of Santorini is sandy with very small amounts of clay. It is also low in organic matter and, with the exception of a small area around the hill of Profitis Ilias, does not contain calcium carbonate. For these reasons, despite the fact that the ground is rich in potassium, plants are unable to absorb the quantities required to neutralise tartaric acid to any great degree. This is the reason for the high level of acidity of the wines of Santorini. The climate, with the scarcity of rain, also contributes to the low absorption of potassium, as does the fact that vineyards are not irrigated.

The island is exceptionally dry. During the summer months, when the grapes are ripening, temperatures during the day are very high. During this prolonged dry period, the hydration needs of the plants are supplied by the mists resulting from the evaporation of the sea. These rise from the caldera and cover the island.

At the same time, during the summer months, the island is buffeted mercilessly by the north winds, known as '*Meltemi*', which prevent the accumulation of moisture on the grapes during the day. At night, however, when temperatures fall and the climate conditions become relatively damp, the island's volcanic soil absorbs the moisture and, in that way, nourishes the vines.

In places where the ground slopes steeply, the people of Santorini have constructed the famous *pezoules* (steps). In other words, they have shaped the land into terraces in order to facilitate cultivation and limit water loss.

As a result of this unique combination of climate and soil, the grapes of Santorini ripen quickly and maintain their acidity.

Like everything else in windswept Santorini, even the vines are unique in form. The plants are widely spaced and low to the ground. In order to protect the grapes from the relentless winds which buffet the island in winter, the people of Santorini have a method of pruning the vines into crown shapes with the grapes growing on the inside.

Serious afflictions by insects and diseases are rare. The only plant protection intervention is one or two preventive applications of sulphur in the spring.

The vineyards of Santorini are the most ancient in all of Greece. Some vines could be as much as 300 years old. The vines have their own roots. They are not grafted onto American rootstocks. This is because phylloxera, the harmful insect that continues to destroy vineyards around the world, never reached here. Fortunately, the island's volcanic soil, with its scarcity of clay and very high sand content (93-97 %), does not support it.

Consequently, a number of factors create a microclimate like no other in the world. It helps the grapes to ripen fully, giving them special characteristics such as the refreshing high acidity and high alcoholic strength.

8.5. *Quality-related, historical, cultural and social link and geographical environment of the white wine*

Product details

The vineyards of the islands of Santorini and Thirasia are veritable belvederes over the Aegean Sea. During summer, the northerly winds, the famous *Meltemi*, prevent high temperatures, thus creating a particular microclimate. This enhances the ripening of the grapes and their composition during the 'analytical' ripening stage, i.e. taking into account acidity, colour, aromatics, sugars, etc. The result is wines of exceptional quality. Wines with the Santorini PDO are made from local grape varieties Assyrtiko, Athiri and Aidani.

In particular, the dry white wine with the Santorini PDO is made from at least 85 % Assyrtiko grapes. The remaining percentage is made up of Aidani and Athiri grapes.

The combination of the climate, composition of the islands' soils, grape varieties grown, care bestowed on the vines and the wine-making techniques used, contributes to the quality characteristics of the Santorini PDO wines. This combination enables them to age and improve their characteristics over time. The aged dry white wine is a deep golden yellow colour with orange tints. Its aromas are mainly floral, green fruit such as quince and various jammy fruits. Nutty notes such as roasted almonds and hazelnuts are also present. Spiced notes are often found, such as cumin and coriander, aromatic herbs such as geranium, thyme, sage, chamomile and a finish of dried fig. The aromas are also present as flavours, together with honey and dried fruits. The aged wines also have a buttery texture. As a result of the above, these wines are rich and complex with body, and an even longer aftertaste.

8.6. *Quality-related, historical, cultural and social link and geographical environment of the white wine*

Causal interaction

As detailed in the sections above, the uniqueness of the wines with the Santorini PDO is due to the specific characteristics of the island and the specific cultivation techniques. These include:

1. 'Basket' training. The characteristic vine cultivation method used in Santorini, it is a local practice which has survived from antiquity to the present day. To form the 'baskets', Santorini's experienced wine-growers twist the canes together into large crowns, like natural baskets, which rest on the island's volcanic soil. The grapes ripen within the protection of the baskets, where they are not at risk. Meanwhile, the vines are able to withstand the particularly difficult soil and climate conditions of Santorini. These are as follows:

— very strong winds, especially in spring, the season in which the new shoots appear;

— sharply whipping sands from the volcanic soil, driven by the wind;

— blazing sunshine throughout the summer;

— lack of water (except for the sea mists at night);

2. The characteristic soil, which is sandy, a mixture of pumice and ash, rich in magnesium, calcium and iron, with significant capacity to absorb water;

3. The Mediterranean climate with mild winters and cool summers, when the sea breezes from the north cool the vineyards; and

4. The significant difference in temperature between day and night, together with the sea-mist that descends on the vineyards, keeping the vines cool and protecting them from the strong sunshine, benefitting the development of the grape quality.

The distinctive microclimate of the islands in the demarcated area interacts with the relief of the land, and the grape varieties of the area produce wines of great aromatic complexity. Citrus fruit, and especially citrus flowers, predominate, such as citron, lemon, grapefruit and blood orange. White-fleshed fruits are also especially prevalent, as are green fruits such as pear and green apple. Next come stone fruits such as white peach, apricot and loquat. Then we find tropical fruit, for example mango, pineapple, lychee and melon. In the mouth, the first impression is the strong sense of acidity balanced with the warm and sweet sensation of the high level of alcohol. Citrus fruits, and especially flowers, predominate with citron, lemon, lime, grapefruit and blood orange, along with white-fleshed fruits such as pear, which is a principle characteristic of Assyrtiko, and green apple, and stone fruits such as white peach, apricot and green fruits (lychee, loquat). Depending on the quantities of Athiri and Aidani, we can also find tropical fruit such as mango and pineapples. Another feature found on Santorini is the intense salty tang. This is not related to the grape variety but rather to the proximity of the vineyards to the sea. Yet another intense flavour characteristic is minerality, meaning the taste of wet stones.

As a result of the above, the wines of Santorini are rich, with body and have an aftertaste that lingers for several seconds.

8.7. *Quality-related, historical, cultural link to the geographical environment of naturally sweet/raisined wine and liqueur wine from raisined grapes*

Quality

The vineyards of Santorini are among the oldest in the entire world, dating back to prehistoric times. The tradition of viticulture has existed for at least 3 500 years. The unique climate, together with the soil composition, mean that the grape varieties used in vinification produce wines of outstanding character. Descriptions of 19th century travellers tell of the outstanding organoleptic characteristics of the wine. These characteristics are due to the effect of the natural environment on the grapes and, by extension, on the wines of Santorini. At that time, the wine of Santorini was highly sought after abroad. Given its high alcoholic strength, for many years it was sold to fortify wines from other areas that were low in alcohol.

In addition to their historical significance, the vineyards are notable today for producing unique, high quality wines which, as they age, give expression to the very soil of Santorini, to that unique terroir of the island's vineyards.

These days, wine producers put the local grapes to best use, honouring their organoleptic characteristics. They produce quality wines, recognised in international competitions, both in Greece and abroad.

In order to safeguard the link between the wines of the Santorini PDO and their quality, every year the wines are subjected to organoleptic examination by an established committee. Wines which do not comply with the relevant specifications cannot be made available as Santorini PDO wines.

A study by the Agricultural University of Athens showed that the wines of Santorini were especially rich in bioactive phenolics, owing to the unique training method that uses the traditional basket-shape. This characteristic vine-cultivation method has been employed in Santorini since antiquity, and is wholly consistent with the other features of cultivation, as follows:

I) the characteristic soil, which is sandy, a mixture of pumice and ash, rich in magnesium, calcium and iron, with significant capacity to absorb water;

II) the Mediterranean climate with mild winters and cool summers, when the sea breezes from the north cool the vineyards;

III) the significant difference in temperature between day and night, together with the sea-mist that descends on the vineyards, keeping the vines cool and protecting them from the strong sunshine, benefitting the development of the grape quality.

8.8. *Quality-related, historical, cultural link to the geographical environment of naturally sweet/raisined wine and liqueur wine from raisined grapes*

Historical link

On the trail of the wine-making tradition of Santorini, we journey back in time to the third millennium BC. In the excavations of Akrotiri, finds such as charcoal from vine wood and bunches of grapes as decorative motifs in vase-painting of the time show that wine-growing was one of the main activities of the population. The prehistoric vineyards were destroyed by the great eruption of the volcano, around 1650 BC, which obliterated all trace of human and plant life from the island for some three centuries.

Viticulture and wine production must have been a major component of the economy of Akrotiri at the time of its destruction. This is confirmed by the physical presence of charcoal from vine wood and grape pips, and also by the special system for treading the grapes and collecting the must. The treading trough and vat below are the essential equipment. Meanwhile, a large basket full of lime, which was found in the treading trough, led archaeologists to think that lime could have served as a type of filter for clearing the must.

The wine was stored in large pithoi (jars) which were sealed with wax. Indeed, on the neck of such a vessel, symbols scratched in Linear A script have been recognised as referring to wine. In general, the multiplicity of storage vessels, along with the stirrup jars, found in Akrotiri suggest not only significant wine production, but also a developed trade in wine. Bunches of grapes were used as decorative motifs in vase-painting of the time. There is evidence for wine-making and trade in wine in the form of certain types of vessels with spouts close to their narrow bases, as well as the multitude of stirrup jars: pots designed primarily for transporting liquids. Santorini has thus far furnished at least 50 % of all examples of this early type of vessel found in the Aegean region.

According to Herodotus, the Phoenicians were the first settlers following the catastrophe. They, and those who followed, had to cope with an extreme environment in order to survive. In order to meet their nutritional needs, they tried cultivating different species of plants which they brought with them and with which they were familiar. Only the vine succeeded in surviving through the centuries in Santorini's hostile environment. It is an adaptable plant and especially resistant to the hot and dry conditions of the island, with a sturdy and well-developed root system that penetrates the soil of Santorini. Aspa is the name used by local people for the hard and compact soil formed from multiple layers of volcanic material: ash, lava, pumice and debris. This aspa covered the limestone and slate subsoil in the course of successive volcanic eruptions. Centuries of human toil are stamped on the island landscape and bear witness to the efforts of the people of Santorini throughout the ages to dominate their land.

From the archaic and classical periods, we do not have direct evidence of vine cultivation. But it would be strange if the inhabitants of Santorini did not practise it in such ideal ground. It is difficult to imagine the presence of rich landowners on Santorini if they were not growing a product that would bring them large profits. And, to date, such a product has proved to be none other than wine.

From the 12th to the 17th century, the Venetians ruled the island of Santorini. From the outset, Europeans appreciated Greek wines, not only for their quality, but also because they could withstand long sea voyages. Therefore, Frankish and Venetian ships began carrying ever more wine from Santorini. The golden age for the wines of Santorini under Venetian rule would come to an end with the final conquest by the Turks. The wines had had an extraordinary career, with illustrious moments, such as their fame in Paris.

8.9. *Quality-related, historical, cultural link to the geographical environment of naturally sweet/raisined wine and liqueur wine from raisined grapes*

Cultural, social and economic links

Vines and wine have been inseparably linked to the cultural, social and economic lives of the people of Santorini since ancient times.

Vinsanto is seen continuing the tradition of passos, the name for the raisined wine of antiquity for which the Aegean islands were famed.

There are few wines today that have maintained the same form and production methods as in ancient Greek times. With a sweet taste on the tongue, Hesiod, in the seventh century BC, wrote: 'Show the grapes to the sun for 10 days and nights, and leave them in the shade for 5'. In this way, he gives us the ancient recipe for wine-making.

Vinsanto delights us with the same taste of the wines drunk undiluted at the symposia of Plato and Socrates.

In the 12th century, the Venetian conquerors of the island renamed this wine, calling it 'Vino di Santorini' (wine of Santorini). This became 'Vino Santo' and subsequently 'Vinsanto'. Under the name 'Vinsanto', it reached the ports of Constantinople, Russia, Trieste, Ancona and Venice. This famous sweet wine, which manifests the uniqueness of Santorini, complemented the sumptuous banquets of medieval rulers. For many centuries, it was the communion wine in the chalices of the Orthodox Church of All Russia.

The first known reference to the name 'Vinsanto' dates from 1729. In a letter to the Catholic Bishop of the island, some sea-captains wrote that a pirate ship had plundered two vessels from Santorini and taken ten barrels of wine and five of Vinsanto.

Santorini has always combined great productivity with quality and an outward-looking disposition. Exports of Vinsanto reached a peak during Venetian and Turkish rule, and again in the 19th century when Santorini exported more wines than the rest of Greece combined. Under Turkish rule, the lack of extensive croplands meant that Muslim populations did not settle there. The people of Santorini organised their communities democratically and, taking full advantage of the peace that reigned in the Aegean following the Ottoman conquest, they developed trade and shipping, as in prehistoric times. Alexandria, Taganrog and Constantinople were the most important centres for the export of large quantities of wine from Santorini. It is known that, historically, Vinsanto was exported to Russia since at least 1786. Indeed, the economy of Santorini declined when exports of Vinsanto to Russia stopped on account of the October Revolution.

Evidence of the island's ancient past is preserved today in the archaeological sites of Akrotiri and Mesa Vouno, in the archaeological museums of Santorini and Athens, and in the Gyzi Megaron Cultural Centre. Indeed, the entire island, with its caldera, volcanic rocks, traditional settlements, towers and caves, is a monument to living history.

These days, we find wineries with hi-tech equipment, fully dedicated to the production of quality wines.

This cultural, social and economic link has been confirmed in recent years by a series of events on the island, such as the Ampelos ('Vine') symposia. Santorini was selected as the venue for these international vine symposia as, apart from being among the world's most beautiful and unique places, it has a 3 500 year tradition of vine cultivation and wine production. This tradition has been nurtured by the unique eco-system of this volcanic Aegean island.

8.10. *Quality-related, historical, cultural link to the geographical environment of naturally sweet/raisined wine and liqueur wine from raisined grapes*

Geographical environment and geographical origin

In the production area for wines with the Santorini PDO, vineyards cover around 12 000 stremmata. Starting at sea-level, they extend to terraces up to 300 metres in height.

The region has a typical Mediterranean climate with strong sunshine, hot and dry summers and mild winters. The average annual maximum temperature is 23 °C, while the minimum is 14 °C. The total annual rainfall averages between 250 and 370 millimetres.

Santorini is mostly formed of deposits of local soil from the Tertiary period, pumice and lava. The soil of Santorini is sandy with very small amounts of clay. It is also low in organic matter and, with the exception of a small area around the hill of Profitis Ilias, does not contain calcium carbonate. For these reasons, despite the fact that the ground is rich in potassium, plants are unable to absorb the quantities required to neutralise tartaric acid to any great degree. This is the reason for the high level of acidity of the wines of Santorini. The climate, with the scarcity of rain, also contributes to the low absorption of potassium, as does the fact that vineyards are not irrigated.

The island is exceptionally dry. During the summer months, when the grapes are ripening, temperatures during the day are very high. During this prolonged dry period, the hydration needs of the plants are supplied by the mists resulting from the evaporation of the sea. These rise from the caldera and cover the island.

At the same time, during the summer months, the island is buffeted mercilessly by the north winds, known as 'Meltemi', which prevent the accumulation of moisture on the grapes during the day. At night, however, when temperatures fall and the climate conditions become relatively damp, the island's volcanic soil absorbs the moisture and, in that way, nourishes the vines.

In places where the ground slopes steeply, the people of Santorini have constructed the famous pezoules (steps). In other words, they have shaped the land into terraces in order to facilitate cultivation and limit water loss.

As a result of this unique combination of climate and soil, the grapes of Santorini ripen quickly and maintain their acidity.

Like everything else in windswept Santorini, even the vines are unique in form. The plants are widely spaced and low to the ground. In order to protect the grapes from the relentless winds which buffet the island in winter, the people of Santorini have a method of pruning the vines into crown shapes with the grapes growing on the inside.

Serious afflictions by insects and diseases are rare. The only plant protection intervention is one or two preventive applications of sulphur in the spring.

The vineyards of Santorini are the most ancient in all of Greece. Some vines could be as much as 300 years old. The vines have their own roots. They are not grafted onto American rootstocks. This is because phylloxera, the harmful insect that continues to destroy vineyards around the world, never reached here. Fortunately, the island's volcanic soil, with its scarcity of clay and very high sand content (93-97 %), does not support it.

Consequently, a number of factors create a microclimate unique in the world, helping the grapes to ripen fully. In combination with the effects of exposure to the sun and of ageing, these factors result in the production of sweet wines with their concentrated characteristics and a wonderful velvety sensation in the mouth.

8.11. *Quality-related, historical, cultural link to the geographical environment of naturally sweet/raisined wine and liqueur wine from raisined grapes*

Product details

The vineyards of the islands of Santorini and Thirasia are veritable belvederes over the Aegean Sea. During summer, the northerly winds, the famous *Meltemi*, prevent high temperatures, thus creating a particular microclimate. This enhances the ripening of the grapes and their composition during the 'analytical' ripening stage, i.e. taking into account acidity, colour, aromatics, sugars, etc. The result is wines of exceptional quality.

Furthermore, the combination of the climate, composition of the islands' soils, grape varieties grown, care bestowed on the vines and the wine-making techniques used, contributes to the quality characteristics of the Santorini PDO wines.

The naturally sweet/raisined white wine and the liqueur wine from raisined grapes with the Santorini PDO are made from at least 51 % grapes of the Assyrtiko variety. The remainder is made up of grape varieties Aidani and Athiri with small amounts of 'foreign' white varieties grown in the traditional way on the island group of Santorini and Thirasia. Specifically these varieties are Gaidouria, Katsano, white Moschato, Monemvassia, Platani, Potamissi and the red variety Roditis.

After the harvest, the grapes intended to produce Vinsanto are laid out to dry in the hot Aegean sunshine, while the drainage properties of the soil protect them from rot. After 7 to 12 days, the grapes have lost most of their moisture while all of their characteristics have been concentrated. The grapes are then carefully crushed and pressed, and slow fermentation begins, which is monitored daily. Given the high sugar content, fermentation stops prematurely. The result is a naturally sweet wine without the addition of strong alcohol. The wine is then matured in oak barrels for at least 24 months. Time is kind to Vinsanto, and of incalculable value in bestowing aromas and flavour as the wine rests serenely in the islands' dark cellars. Time concentrates the characteristics of Vinsanto, giving it a wonderful velvety feel in the mouth, and making ageing an integral part of its production.

Production of Vinsanto requires around 6 kilos of grapes per litre. This can rise to as much as 10, depending on evaporation during the long ageing. It is therefore extremely rare, as everything of great worth is.

The aforementioned local grape varieties used to produce Vinsanto contribute in their own ways to its greatness. Assyrtiko contributes the bracing acidity, nobility and mineral notes; Aidani, the body and depth, its heady aroma; and Athiri the finesse and delicacy of character. Together, they all contribute to the complexity of Vinsanto.

8.12. *Quality-related, historical, cultural link to the geographical environment of naturally sweet/raisined wine and liqueur wine from raisined grapes*

Causal interaction

As detailed in the sections above, the uniqueness of the wines with the Santorini PDO is due to the specific characteristics of the islands and the specific cultivation techniques. Specifically:

1. 'Basket' training. The characteristic vine cultivation method used in Santorini, it is a local practice which has survived from antiquity to the present day. To form the 'baskets', Santorini's experienced wine-growers twist the canes together into large crowns, like natural baskets, which rest on the island's volcanic soil. The grapes ripen within the protection of the baskets, where they are not at risk. Meanwhile, the vines are able to withstand the particularly difficult soil and climate conditions of Santorini. These are as follows:

   — very strong winds, especially in spring, the season in which the new shoots appear;

   — sharply whipping sands from the volcanic soil, driven by the wind;

   — blazing sunshine throughout the summer;

   — lack of water (except for the sea mists at night);

2. The characteristic soil, which is sandy, a mixture of pumice and ash, rich in magnesium, calcium and iron, with significant capacity to absorb water;

3. The Mediterranean climate with mild winters and cool summers, when the sea breezes from the north cool the vineyards; and

4. The significant difference in temperature between day and night, together with the sea-mist that descends on the vineyards, keep the vines cool and protect them from the strong sunshine, benefitting the development of the grape quality.

The interplay of all of these factors, combined with the effect of laying the grapes out in the sun, produces wines with an intense and complex aroma. There are notes of spices, raisin syrup, chocolate, coffee, tea, sour cherry, prunes and figs, cherry and sour cherry jam, and honeycomb. During ageing, the aromas become more intense and complex. In the mouth, the wine is rich, with a startling acidity balancing the sweetness. Rounded, velvety wine, rich with notes of honey and lemon. Wine with unique complexity of aromas and flavour, excellent structure and long.

9. **Essential further conditions (packaging, labelling, other requirements)**

Additional provisions relating to wine labelling

Legal framework:

In national legislation

Type of further condition:

Additional provisions relating to labelling

Description of the condition:

1. Terms referring to certain production methods

In Ministerial Decision No 280557/9.6.2005 laying down the time of ripening, ageing and placing on the market of wines with a Superior Quality Designation of Origin and Local Wines, and the terms used in the labelling of such wines that relate to their production method or preparation methods (Government Gazette, Series II, No 818/15.6.2005), Article 1 refers to the conditions for using the following indications:

— 'ΝΕΟΣ ΟΙΝΟΣ' or 'ΝΕΑΡΟΣ ΟΙΝΟΣ' (NEW WINE)

— 'ΩΡΙΜΑΝΣΗ ΣΕ ΒΑΡΕΛΙ' or 'ΩΡΙΜΑΣΕ ΣΕ ΒΑΡΕΛΙ' (BARREL MATURED)

— 'ΠΑΛΑΙΩΜΕΝΟΣ ΣΕ ΒΑΡΕΛΙ' or 'ΠΑΛΑΙΩΣΗ ΣΕ ΒΑΡΕΛΙ' (BARREL AGED)

2. Stating the vintage on the labelling

Where the terms 'ΝΕΟΣ ΟΙΝΟΣ' or 'ΝΕΑΡΟΣ ΟΙΝΟΣ' ('NEW WINE') are used on the labelling of wines, it is mandatory to print the vintage year, in accordance with Article 1(2) of Ministerial Decision No 280557/9.6.2005 laying down the time of ripening, ageing and placement on the market of wines with Superior Quality Designation of Origin and Local Wines, as well as of the terms used in labelling thereof relating to their production method or preparation methods (Government Gazette, Series II, No 818/15.6.2005).

3. Traditional terms

— Traditional terms in accordance with Ministerial Decision No 235309/7.2.2002 on the approval of traditional terms used for wines which are linked to the designation or origin or the geographical indication (Government Gazette, Series II, No 179/6.2005).

Under the above Ministerial Decision, the traditional terms which can be used on the labelling of wines with the Santorini PDO are: ΛΕΥΚΟΣ ΑΠΟ ΛΕΥΚΑ ΣΤΑΦΥΛΙΑ / Blanc de blancs, ΑΠΟ ΝΗΣΙΩΤΙΚΟ(ΟΥΣ) ΑΜΠΕΛΩΝΑ(ΕΣ) / Vin de vignoble(s) insulaire(s) [Wine from island vinyards], ΑΠΟ ΑΜΠΕΛΩΝΑ(ΕΣ) ΣΕ ΠΕΖΟΥΛΕΣ / Vin de vignobles en terrasses [Wine from terraced vinyards], ΟΙΝΟΣ ΛΟΦΩΝ / Vin de collines [Wine from hillsides], ΟΙΝΟΣ ΠΛΑΓΙΩΝ / Vin de coteaux [Wine from slopes], Λιαστός [Raisined], VINSANTO, ΝΥΧΤΕΡΙ/Nykteri.

— Indication of traditional terms, as referred to in Article 112 of Regulation (EU) No 1308/2013, which are linked to this designation of origin or geographical indication.

In accordance with Article 113 of Regulation (EU) No 1308/2013, and as defined and recorded in the e-Ambrosia database, the traditional terms that can be used in the labelling of wines with the Santorini PDO, on condition of compliance with the relevant EU and national legislation, are as follows:

Ονομασία Προέλευσης Ανωτέρας Ποιότητας (ΟΠΑΠ) (Superior Quality Designation of Origin (SQDO)) instead of the PDO, Αγρέπαυλη (Agrepavlis), Αμπέλι (Ampeli), Αμπελώνας (ες) (Ampelonas(es)), Αρχοντικό (Archontiko), Ειδικά επιλεγμένος (Specially selected), Επιλογή or Επιλεγμένος (Selection or Selected), Κάστρο (Kastro), Κτήμα (Ktima), Μετόχι (Metochi), Μοναστήρι (Monastiri), Πύργος (Pyrgos) and Λιαστός (Raisined).

In addition:

Νυχτέρι (Nykteri): traditional name reserved for dry white wines with the Santorini PDO, with a minimum natural alcoholic strength by volume of 13.5 %, fermented either in tanks or barrels and then left to mature in wooden barrels for at least three months.

Vinsanto: traditional name reserved for the sweet wines with the Santorini PDO made from raisined grapes.

Derogations

Legal framework:

In EU legislation

Type of further condition:

Derogation concerning production in the demarcated geographical area

Description of the condition:

Article 5(1) of Commission Regulation (EU) 2019/33

supplementing Regulation (EU) No 1308/2013 of the European Parliament and of the Council as regards applications for protection of designations of origin, geographical indications and traditional terms in the wine sector, the objection procedure, restrictions of use, amendments to product specifications, cancellation of protection, and labelling and presentation

Link to the product specification

http://www.minagric.gr/images/stories/docs/agrotis/POP-PGE/TEXNIKOI%20FAKELOI%20OINON%20POP-PGE%20ENGLISH/PDO%2031/prodiagrafi_POPSantorini_201221.pdf