Annex

TECHNICAL FILE
GEOGRAPHICAL INDICATION
'MIRTO DI SARDEGNA'

1. Name of the spirit drink including the geographical indication: *Mirto di Sardegna*

Category of the spirit drink including the geographical indication: *Liqueur*

2. Description of the spirit drink

The name 'Mirto di Sardegna' is reserved for liqueurs obtained in the Region of Sardinia from a water-alcohol infusion of myrtle berries (*Myrtus communis* L.) harvested and processed within the Autonomous Region of Sardinia.

The 'Mirto di Sardegna' liqueur is produced from the infusion in water and ethanol of fully ripened myrtle berries.

a) Main physical, chemical and/or organoleptic characteristics of the product:

pH: 5.0-5.5.

Chromaticity coordinates L, A, B: $L \leq 80$; $A \geq 10$, $B \leq 20$.

Anthocyanins:

- presence of 3-monoglucosides with dominance of malvidin 3-monoglucoside;
- absence of acylate and p-cumarate anthocyanins.

Organic acids:

- gluconic acid ≤ 5 000 mg/l;
- citric acid ≤ 500 mg/l;
- absence of tartaric acid.

Colour: ruby red, initially with purple tinges which over time tend to turn into warmer hues.

Aroma: intense and distinctive of myrtle berries.

Flavour: complex, highly distinctive due to the fruit used, 'warm' structure owing to the significant alcohol content but also 'mellow' owing to the sugar content; notable slightly bitter after-taste resulting from the balsamic notes of the berries.

The organoleptic characteristics are assessed by a trained tasting panel using a specific sensory scoresheet. The official tasting panel, which will be set up within two years of the G.I. being approved, will be made up of duly certified persons. The tasting sessions will be performed in a suitable 'blind' tasting room. The 'Mirto di Sardegna' to be tasted will be presented in ISO-type glasses at a temperature of 15°C. In order to receive the designation 'Mirto di Sardegna', the liqueur must obtain an average score of not less than 75/100.

b) Specific characteristics of the spirit drink as compared to the relevant category

In order to obtain the G.I. 'Mirto di Sardegna', the liqueur must meet all the requirements detailed in this Technical File and in particular:

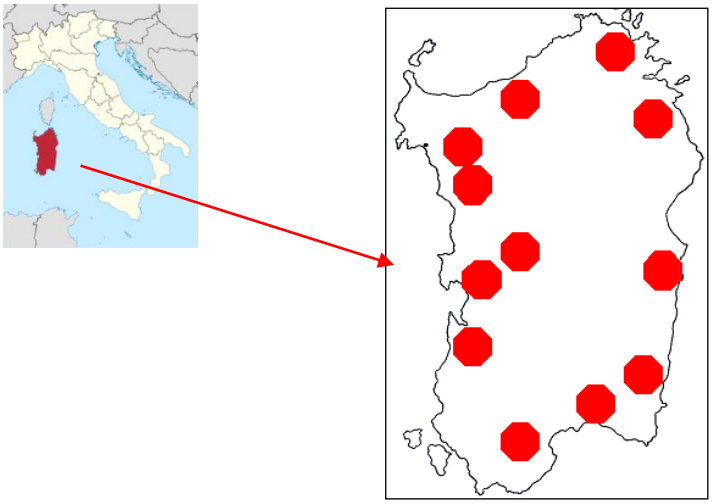
- *alcohol content* of between 28 and 36 % vol.
- *total sugar content* of less than 270 g/litre;
- *minimum quantity of berries* of 150 g/litre of liqueur;
- absence of added flavourings and colourings;
- absence of antioxidants and added preservatives;

- at the time of bottling, it must comply with the chemical and physical requirements set out above;
- it must obtain from the tasting panel an average score of not less than 75/100;
- it must be produced solely by the methods and under the constraints set out in detail under paragraph d) of this Technical File;
- it must be packaged in accordance with paragraph d) of this Technical File.

c) Geographical area concerned

The geographical area in which 'Mirto di Sardegna' is produced covers the entire territory of the Autonomous Region of Sardinia, within which all production stages, from picking the berries to bottling the final product, must be performed. The myrtle (*Myrtus communis* L.) is an evergreen shrub typical of the Mediterranean maquis which grows spontaneously in the coastal area of Sardinia up to an elevation of 600-800 m above sea level, preferring soil with an acid or neutral pH. It is found only rarely at higher elevations and nearly always as isolated plants. However, it may also grow on calcareous soils when consisting of more ancient limestone on with well-leached soils have evolved, usually with a neutral pH.

Figure 1 - Location of Sardinia and identification, in the Region, of the main areas where myrtle berries are picked from wild plants.



As to its ecology, myrtle is often part of mixed shrub communities or may be a component of the undergrowth of holm oak and cork oak woodlands. Occasionally, under especially favourable soil and climatic conditions, myrtle plants may colonise whole stretches of land as the dominant species covering fairly extensive areas; these are known as 'mirteti' (myrtle copses). The species is currently also cultivated on calcareous soils with a sub-alkaline pH, a sign of its adaptability to new environments.

d) Method for obtaining the spirit drink

The 'Mirto di Sardegna' liqueur is made by the infusion in water and alcohol of fully ripe myrtle berries, with picking, processing and bottling taking place exclusively within the territory of the Autonomous Region of Sardinia.

Harvesting, delivery and storage of the berries The berries must be picked directly from the plant once fully ripe; the plants can be either wild or cultivated in conditions very similar to their natural growing conditions in the wild. The berries are transported from the picking site to collection centres or production facilities in containers allowing adequate air circulation and ensuring they remain whole. The berries must be delivered to production facilities as soon as possible in order to pass acceptance checks verifying the absence of moulds or of any signs of rot, and their correct degree of ripening. The berries must be washed in water to remove any coarse impurities (e.g. dust, earth, etc.). The weight of any myrtle leaves present together with the berries may not exceed 0.1% of the weight of the berries themselves.
Infusion The berries are placed in infusion as soon as possible after their delivery to the production facility. They may not be frozen. The whole or pressed berries must be placed in infusion in stainless steel tanks, for a period of not less than 15 days and not exceeding 8 months, in a water and alcohol solution with an alcohol content of not less than 40 % vol. The alcohol used must be solely neutral ethyl alcohol classified in accordance with current legislation. The quantity of berries to be infused must not be less than 150 g/l of the final product. No preservatives, flavourings or colourings may be added. At the end of the infusion period, the infusion is run off ('free-run infusion'); the berries still soaked in alcohol may be supplemented with demineralised water which after a few days is run off ('second run-off'). The berries may then be pressed to recover the liquid portion ('pressing'). The three types of infusion (free-run, second run-off and pressed infusion) may be combined together and filtered to create the infusion forming the basis for making the liqueur. All the operations involving the transfer of the liqueur must be performed in such a way as to avoid altering the structure of the product or triggering phenomena which may affect the liqueur's distinctive, delicate and prized aroma and flavour.
Production of the liqueur The liqueur is made by mixing the alcohol infusion with a syrup made with water, sugar and possibly honey. Adding honey is allowed up to 15% of the weight of the sugar. The water used in this stage of the process must be demineralised by means of ion exchange or reverse osmosis equipment. All the processes, from infusion of the berries to the production and storage of the liqueur, must take place in stainless steel containers. 'Mirto di Sardegna' must be made with an infusion produced not earlier than 24 months from the start of the berry infusion process and stored in still conditions in stainless steel tanks. The filtering and clarification processes may employ additives authorised by the current national and EU rules, taking care not to expose the liqueur to any stress likely to destabilise it. All the operations involving the transfer of the liqueur must be performed in such a way as to avoid altering the structure of the product or triggering phenomena which may affect the liqueur's distinctive, delicate and prized aroma and flavour.
Bottling 'Mirto di Sardegna' must be marketed exclusively in glass bottles in order to preserve fully its sensory characteristics. Furthermore, the Producer Consortium of Mirto di Sardegna Tradizionale believes that an explicit prohibition should be established on bottling Mirto outside the territory of the Autonomous Region of Sardinia. The bottling of 'Mirto di Sardegna' must take place at the same production facility. This is because the production of 'Mirto di Sardegna' takes place entirely without the use of anti-oxidants and preservatives, the absence of which would inevitably damage the sensory qualities of the 'Mirto di Sardegna' if it were transported prior to bottling, particularly as regards the preservation of the soft elegance of its aromas. In this regard, paragraph b) of the Technical File has already referred to the scrupulous care and technical procedures put in place by producers when making the necessary transfers of the liqueur within the production facilities. *Packaging* 'Mirto di Sardegna' may not be packaged in bottles likely to mislead consumers or affect the reputation of the liqueur in any way. The capacity of bottles must not exceed 1.5 litres. Bottles may not be closed by 'crown caps'.

e) Details bearing out the link with the geographical environment or the geographical origin

The production of 'Mirto di Sardegna' liqueur is closely linked to its area of origin, as documented by a number of historical sources. Myrtle or *Myrtus communis* L. is an aromatic plant typical of the Region of Sardinia. Information on this plant is to be found in a number of works on Sardinian flora and the region's herbs and medicinal plants. In addition to the aromatic properties of its berries and leaves, myrtle is also known in popular culture for its digestive, balsamic and disinfecting properties. Almost all works mention the symbolic role that myrtle, the plant sacred to Venus, had throughout antiquity. The start of marketing of 'Mirto di Sardegna' liqueur cannot be dated with certainty because the statistics on liqueur production on the island are always very generic, and the list only states the undifferentiated quantities for 'assorted liqueurs'. Historical sources confirm that 'Mirto di Sardegna' was produced domestically in Sardinia for family consumption or to be presented as a gift to friends and acquaintances on special occasions. The same sources make no mention of the trade of myrtle liqueur either on the island or for export. Indeed, any trade was likely to be very limited if not non-existent owing to the very strict rules on trade. The hefty taxes levied on alcoholic products also led to its production being mostly clandestine, to escape checks and the risk of heavy penalties. Nevertheless, the monumental *Dizionario del Casalis* already provides interesting information on the production of myrtle as early as the first half of the 19th century. This work mentions the fairly widespread presence of stills for the production of spirit and alcohol and refers to the growth of large myrtle trees on the island. Under very favourable soil and climate conditions, the myrtle plant can grow to a height of 3-4 metres. It may therefore be safely inferred that the abundance of raw material with pronounced aromatic properties to be added to alcohol or spirit certainly favoured the production of rosolio liqueurs and other spirit drinks, and that already at that time this liqueur was produced by many households. It is therefore hardly surprising that the basic process for producing 'Mirto', albeit with some minor variations, is largely the same throughout Sardinia. This process comprises essentially a long and complete infusion in alcohol (or, more rarely in spirit) of fully ripened, freshly picked berries, followed by mixing of the infusion with a water and sugar syrup. It is only from the mid-1970s that documented information on the commercial production of this liqueur becomes available. During two island trade fairs held in 1975 alongside winemakers, some Sardinian liqueur producers also exhibited their products, including 'Mirto di Sardegna'. The following year, the same manufacturers participated in the 43rd Spring Fair in Grenoble (France). The growing market success of these island products is proven by the fact that in 1977 distillates and liqueurs made in Sardinia were given a dedicated sector at the Regional Exhibition of typical wines and liqueurs. The aim was to help promote awareness and the marketing of the island's best liqueurs and distillates. The regional exhibition of typical wines and liqueurs has thus made it possible over the years to spread knowledge among the public and businesses of the liqueurs rooted in Sardinian tradition. The press releases and publications of the time focused on the genuine nature and traditional aspects of the production of 'Mirto di Sardegna' liqueur, stressing the fact that the production process of the main manufacturers was essentially very similar to the traditional home-made process. In 1994, at the initiative of one of the main producers, the *Associazione Produttori Liquore Mirto di Sardegna Tradizionale* was established with the aim of regulating the production of the liqueur 'Mirto di Sardegna tradizionale', establishing rules for the entire production chain, protecting the source and genuineness of the raw material and enforcing quality standards for the final product. In 1998 this Producers' Association published a chemical and product study describing in detail the composition of the berry and of the liqueur made from it. The results of this study have made it possible to identify, assess and quantify the parameters characterising the myrtle liqueurs obtained exclusively by long infusion of perfectly ripe fresh berries in a mixture of alcohol and water, and which exclude categorically, in line with tradition, the use of any other flavourings, colourings and preservatives, whether or not natural, or other extraneous substances. To this day, the berries are picked by hand and, under the production specifications, are transferred to the next stage, i.e. infusion in alcohol, as soon as possible,

ensuring that the 'Mirto di Sardegna' liqueur preserves its full sensory richness. This enables the organoleptic characteristics of the berry to be fully expressed in the liqueur, whose aroma and flavour are those characterising the Mediterranean maquis, hence Sardinia itself, where Myrtle liqueur is one of the most ancient products closely linked to the territory. The results of the above-mentioned scientific investigations have made it possible to draw up strict production specifications making it possible to guarantee, including through stringent checks, the quality, genuineness and origin of 'Mirto di Sardegna'. In 2008 the *Consorzio Produttori Liquore Mirto di Sardegna Tradizionale* was founded by the same producers who had created the Association. This new body has taken over the Association's mission, studies, know-how, and certification system (certificate No 3011). From 1994 onwards, firstly the Producers' Association and subsequently, the Producers' Consortium joined a voluntary product certification scheme managed by a third-party certifying body and attesting that the 'Mirto di Sardegna' liqueur produced by consortium members complies with the production specifications. Today, the Consortium plans to become a Consortium for the Protection of the 'Mirto di Sardegna' GI to pursue increasingly stringent and effective protection of the authenticity of the product.

f) Name and address of applicant

Consorzio Produttori Liquore Mirto di Sardegna Tradizionale
Registered office c/o Studio Borghesan, Piazza Deffenu, 9
09125 Cagliari (CA)

g) Any supplement to the geographical indication and/or any specific labelling rule, according to the relevant technical file.

Labelling The labels on the bottles must bear the following wording:
- the name of the G.I.; '*Mirto di Sardegna*';
- the EU G.I. mark;
- any other indication under the current laws.

Any other voluntary indications, tags or bands on the bottle or packaging.
Traceability and tracking Each manufacturing company must guarantee the traceability and tracking of the production of 'Mirto di Sardegna G.I.' and hence verification of the source of the berries and of the production method, and compliance with the minimum required quantities of myrtle berries per litre of final liqueur.
Controls Checks on product conformity with this Technical File will be carried out by the authorised certifying body in accordance with Article 7 of Ministerial Decree No 5195 of 13 May 2010 implementing Regulation (EC) No 110/2008 of the European Parliament and of the Council.