

## TECHNICAL FILE

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**Geographical indication to be registered** Троянска сливова ракия/Сливова ракия от Троян/Troyanska slivova rakya/Slivova rakya from Troyan

**Category of the spirit drink** Плодова дестилатна спиртна напитка/Fruit spirit/

### Description of the spirit drink

- Physical, chemical and/or organoleptic characteristics

'Troyanska slivova rakya' fruit spirit is a clear liquid with a bright sparkle; its straw yellow to golden colour is the result of maturing in oak barrels. Its aroma is predominantly fruity and typical of the fruit used; the finish has an oaky nuance with notes of vanilla, a delicate and balanced taste and a lingering and pleasant after-taste.

The minimum alcoholic strength of 'Troyanska slivova rakya' fruit spirit is 38 % vol.

The quality of the drink depends on its volatile substance content. The reports on the physico-chemical analyses of different batches of 'Troyanska slivova rakya' fruit spirit indicate that its volatile substance content is in the 300-800 g/hl a.a. range. The aroma of the drink is determined by its ester and aldehyde content, whilst its flavour is determined by its higher alcohol content. The relevant values vary according to the length of time for which the drink is aged in oak barrels. The minimum ageing period is three years. The best batches of 'Troyanska slivova rakya' fruit spirit are matured in oak barrels for up to 25 years.

'Troyanska slivova rakya' fruit spirit which has been in contact with oak for at least three years has the following values: aldehydes - 4-10 g/hl a.a.; esters - 80-135 g/hl a.a.; higher alcohols - 280-340 g/hl a.a.; acids - 45-70 g/hl a.a.

'Troyanska slivova rakya' fruit spirit which has been in contact with oak for seven years has the following values: aldehydes - 8-12 g/hl a.a.; esters - 80-190 g/hl a.a.; higher alcohols - 280-400 g/hl a.a.; acids - 60-110 g/hl a.a.

'Troyanska slivova rakya' fruit spirit which has been in contact with oak for over twenty years has the following values: aldehydes - 12-21 g/hl a.a.; esters - 100-220 g/hl a.a.; higher alcohols - 350-450 g/hl a.a.; acids - 60-260 g/hl a.a.

The above values not only correspond to the statutory requirements but are also responsible for the drink's rich and sought-after organoleptic characteristics.

The Ministry of the Economy has received one test report for 'Troyanska slivova rakya' fruit spirit issued by an accredited laboratory (Annexes 1, 2, 3 and 4) (Annex 5).

**(Annexes 1,2,3 and 4)** and one report issued by the regional wine-tasting commission under the Mizia Regional Vine and Wine Chamber (RLVK), Pleven **(Annex 5)**.

— Specific characteristics (compared to spirit drinks of the same category)

Compared with drinks of the same category, 'Troyanska slivova rakya' fruit spirit has an exceptionally low cyanide content (0.02-0.05 g/hl a.a.), and this means that the ethyl carbamate content – highly undesirable in the final product – is low.

This is the result of removing the stones from the fruit before fermentation takes place.

'Troyanska slivova rakya' fruit spirit is distinguished by a dominant aroma of plums, balanced by notes of oak and vanilla. Its true specificity is due to the varietal composition of the blue plums that are obtained from the Troyan area, the traditional technique by which the drink is produced, and maturing in small oak barrels.

### **Geographical area concerned**

The plum orchards from which the raw material for producing 'Troyanska' slivova rakya' fruit spirit come are located in the northern foothills of the Kalofer area of the Balkan Mountains, in the municipality of Troyan, Lovech Province.

The geographical area in which 'Troyanska' slivova rakya' fruit spirit is produced includes the following localities within the municipality of Troyan:

- the village of Golyama Zhelezna;
- the village of Dalboki Dol;
- the village of Vrabevo;
- the village of Debnevo;
- the village of Balabansko;

as well as Kyorchotovo and Dryanova Mogila, which are within the city of Troyan.

### **(Annex 6)**

The area planted with orchards containing plum trees is 399 158 ha (3 991.58 decares).

The raw material for producing 'Troyanska' slivova rakya' fruit spirit consists of the following varieties:

1. Kyustendil Blue Plum (*Kyustendilska sinya sliva*) - medium-sized fruit (17-22 g); of elongated oval shape, with a dark blue skin covered by a thin waxy bloom; has greenish yellow to golden flesh that is firm, succulent and sweet and separates easily from the stone; has excellent flavour.

2. Stanley - large fruit (30-32 g); the fruit has an ovate shape; with dark purple skin; with greenish-yellow, firm, moderately succulent flesh; with good flavour. The stone is large and separates wholly or only partly.

3. Domestic Blue plum (*Domashna sinya sliva*) - medium-sized fruit (24-25 g); elongated oval shape; with a thin dark blue skin; The flesh is of a yellow-green colour, soft or firm, succulent, sweet/sour, with good taste properties. The stone is medium-sized and separates easily from the flesh.

### **Mechanical composition of the raw material**

Fleshy part – 92-94 %;

Stone – 5-6 %;

Skin - 2 %.

### **Chemical composition of the raw material**

1. Sugar content (expressed as % of weight): 10-14;

2. Acidity (expressed as malic acid, in %): 0.4-0.64;

3. Pectinic substances (in %): 0.4-1.5;

4. Dry matter (%): 18-24; % **(Annex 7)**

### **Method for obtaining the spirit drink**

**Description of the authentic traditional technique for obtaining the spirit drink**

➤ **Production of plum distillate**

'Troyanska' slivova rakya' fruit spirit is obtained from plum distillate produced by distilling fermented plum pulp. The raw materials used are as follows: Stanley plums - 70 %; Kyustendil Blue plums - 17 %; Domestic Blue plums - 13 %.

• **Harvesting and transport**

Only healthy blue plums that have attained technical ripeness are used, and these are processed immediately after they are received.

The plums arrive at the processing centres on lorries equipped with containers of suitable design and capacity and in sacks. The plums are weighed and graded according to their external appearance and sugar content.

• **Processing**

The plums are crushed in fruit grinders and the stones are then separated from the flesh in strainers. The method used to separate the stones from the fruit results in a low cyanide derivative content in the final product.

• **Fermentation and distillation**

The plum pulp is placed in fermentation tanks equipped with acid-resistant covers. A special selection of yeast cultures is then added in a ratio of 2-4 dm<sup>3</sup> per 100 dm<sup>3</sup> of fermenting pulp. Classic fermentation takes place (the cap is submerged with the aid of moveable wooden grills placed at the bottom of the tank). The pulp is stirred occasionally in the tank during fermentation. The sugar and alcohol content and the temperature (the fermentation temperature must not exceed 30 °C) are monitored daily. The readings are recorded in fermentation logs.

The fermented pulp is transferred by means of pumps designed for thick liquids to the distillation plant. Distillation takes place in type NM-72 continuous column stills. This still is of Bulgarian design. Its characteristic features are as follows: it is designed to handle thick liquids, equipped with a flat dephlegmator and makes it possible to purify the distillate of any unwanted impurities such as methanol, furfural, etc.

The distillate has an alcohol content of 55-65 %.

• **Treatment**

The distillate is blended with demineralised drinking water to obtain an alcoholic strength of 42-45 % vol. The 'Troyanska' slivova rakya' fruit spirit is obtained is treated with tannin and gelatine in amounts determined by a laboratory programme. Following vigorous stirring, the drink is left for at least 15 days to clarify and is decanted. It is transferred to a freezer, where it is cooled to -10 °C. This stabilises the drink and prevents potential darkening. The drink is left in vessels to undergo heat processing for 15 days and is then filtered through a press filter.

➤ **Ageing of 'Troyanska' slivova rakya' fruit spirit**

The stabilised 'Troyanska' slivova rakya' fruit spirit is poured into well-prepared transport casks. For maturing purposes, only 300-500 litre oak barrels made from the wood of Bulgarian oak trees that are at least 60 years old are used. Barrels made from the wood of trees of this age have dense, multi-layered wood and are rich in useful substances necessary for developing the taste and aroma of 'Troyanska' slivova rakya' fruit spirit. Oak barrels are preferred for ageing the drink as the porous structure of oak timber allows the drink to 'breathe' and to develop its complex of aromas and flavours.

Staves that have been left to dry naturally for at least three years are used to make the barrels. During this period, oxidation of some of the tannins occurs in the wood, together with partial enzymatic hydrolysis of its components, lignin and hemicellulose. The natural drying of the staves is not just about removing moisture. Moreover, natural drying does not result in cracking and splitting. The barrels used for ageing the drink are highly prized. An old barrel is more valuable than a new one because it no longer contains an excess of tannins. A good-quality barrel, made in accordance with the relevant requirements and used with care, can be used for decades.

When the 'Troyanska' slivova rakya' fruit spirit comes into contact with oak, tannins, colouring matter and other substances are extracted from the oak and gradual changes in quality occur: the characteristic golden tint appears, the flavour mellows and a pleasant, delicate bouquet and balanced taste develop.

The ageing period is at least three years.

Temperature and relative air humidity are important factors in the context of maturing. The moderate climate of the geographical area where 'Troyanska' slivova rakya' fruit spirit is produced helps to ensure that the maturing process takes place in natural and highly favourable conditions. There is a technical requirement for the ageing processes to take place in cellars that are fully or partially underground in order to avoid seasonal temperature differences that would have a detrimental effect on the organoleptic qualities of the drink. The temperature in the ageing cellars remains at 18-22 °C in summer and does not fall below 5 °C in winter.

The use of precisely such cellars for ageing is a prerequisite for the traditional technique used to produce 'Troyanska' slivova rakya' fruit spirit, as is an ageing process lasting for at least three years, allowing the drink's fruit (plum) aroma to remain discernible and even be more dominant than the aroma that is acquired during maturing in oak barrels.

### **Link with the geographical environment or origin**

'Troyanska' slivova rakya' is a fruit spirit which is traditional for, specific to, and typical of its geographical area.

- **Influence of soil and climatic conditions**

The local combination of climate, soil types, air humidity and sunshine favours the development of plums. The best conditions for growing plum trees are where there is a temperate continental climate. The town of Troyan and the localities of the geographical area in which the drink is produced, which are planted with plum orchards, are situated in the northern foothills of the Troyan-Kalofer section of the Balkan Mountains, at an elevation of 400 m above sea-level and hence fall within an area with a moderate climate.

At the same time, the most suitable areas for growing plums in these mountainous and semi-mountainous regions are on east-, north-east- and north-facing slopes that are not very steeply inclined, and have good air circulation and soils that are sufficiently deep and permeable, such as are also to be found in the geographical region where 'Troyanska' slivova rakya' fruit spirit is produced.

The geographical situation and ideal soil and climatic conditions of the Troyan area are a natural prerequisite for the development of fruit-growing and, more particularly, the growing of plums. Even the people of Troyan themselves say that the quality of the drink is due to the climatic conditions that allow the fruit to ripen properly.

- **Influence of temperature, air humidity and precipitation**

The geographical area has hot and relatively dry summers and cold winters.

Plum trees are resistant to the cold and are relatively drought-resistant. Practical observations have shown that plum trees develop and produce fruit best in areas with an average monthly temperature of 16-22 °C during the months of July, August and September, an annual precipitation sum of more than 700 l/m<sup>2</sup>, and relative air humidity of approximately 70 %.

The climate in the Troyan area and the localities around it is markedly mild, the average annual temperature in the area being slightly below the average for northern Bulgaria.

Summers are not as hot, the average July temperature being 21 °C, whereas winters are warmer, with an average December temperature of -2°C.

During the winter months, precipitation is mainly in the form of snow, the snow-cover being about 10 cm thick.

Some of the main reasons for a poor plum harvest are damage to trees and buds during the winter period, which happens when there are very low, sub-zero temperatures, and the premature ripening of the fruit owing to summer heatwaves combined with low soil moisture and air humidity levels. For this reason, plum trees are not planted in places with high summer or low winter temperatures or exposed to cold north winds.

On average, the Troyan area experiences the last spring frost on around 20 April and the first autumn frost on around 28 October. Extremely low temperatures during the period when trees are dormant are a rare occurrence and do not result in damage. Semi-mountainous areas with level or slightly sloping land are the best places to grow plum trees. In terms of relief, localities in the area are typically on sloping ground and semi-mountainous.

As plums are a relatively drought-resistant crop, the quality of the fruit is excellent even when grown on non-irrigated land.

The Troyan area's climate is also very favourable for the cultivation of the late-fruiting blue plum varieties Stanley and Kyustendil Blue (*Kyustendilska sinyá sliva*), as they yield fruit of excellent quality even when not irrigated only in semi-mountainous locations where precipitation, and hence also humidity, is more abundant. Humidity is crucial for the quality of blue plums because low humidity suppresses growth and the fruit turns blue prematurely and falls in great quantities from the trees.

The climate, relative air humidity and air temperature are also essential conditions as regards the ageing of the fruit spirit in barrels.

The moderate climate of the Balkan Foreland (Predbalkan) offers ideal conditions for the ageing process because the most suitable temperature for the normal course of the processes that take place during ageing is in the 18-22 °C range, with 70-80 % relative humidity.

- **Influence of soil and elevation**

The Troyan area does not have suitable conditions for the cultivation of arable/field crops or for large-scale agriculture as in farming areas.

People in this area have therefore specialised for years in fruit growing. Troyan is situated at an elevation of 450 m above sea-level, and research shows that plum trees develop best and produce fruit at an elevation of 600-700 m.

Plum trees are not demanding as far as soil conditions are concerned. They thrive on different types of medium-acid to neutral soils, although brown, dark grey and grey forest soils are the most suitable soils for fruiting trees. The geographical area where the drink is produced has mainly grey forest soils with a shallow A horizon and thick, highly gleyed B horizon. These are in turn divided into light grey and dark grey forest soils.

The suitable climatic conditions in the Troyan area allow fruit to ripen well, and the fruit when ripe is sweet with a slightly tart taste.

The natural climatic factors at play in the region as a whole and the good balance in the physico-chemical composition of the plums between acids and sugar content, combined with the traditions involved in production, are what determine the drink's unique taste.

- **Influence of traditions**

Plum tree cultivation and the production of fruit spirits are traditional for the area around Troyan. There are no written records indicating where fruit spirit distilling came to the Troyan area from. According to elderly people, distilling in this area goes back a long way and so recall previous generations of their families talking about it.

Plum cultivation and the production of fruit spirits (rakia production) have, along with handicrafts, become a major source of income for local people (**Annexes 8 and 9**).

The large-scale expansion of the orchards began after 1900, the area increasing from 1 613.6 ha to 7 134.2 ha between 1921 and 1952. Information on that period states that 'The Troyan area (formerly Troyan District) has a population of 45 000. The average annual income from plum cultivation of BGL 100 000 000 (old, non-denominated Bulgarian Lev) equates to BGL 2 200 per capita (equivalent to approximately BGN 220 in today's money).

At that time, plum cultivation was a major source of income for the population of the Troyan district, thanks to which conditions were created for the material and cultural advancement of the local population after the First World War. The income from plum-growing has provided education for students and facilities for settlements, and has increased the purchasing power of the local population.

During the harvesting season each family gathered plums both to satisfy their needs for various plum preserves and also for distilling.

As a rule, rotten and unripe fruit was not used. Tradition commands that good and ripe plums make a more palatable drink with higher alcoholic strength, and that the fruit spirit obtained be poured into specially prepared oak barrels to mature and acquire a mild and pleasant flavour. Tradition requires that the barrels be stored in cellars in a cool, well-ventilated, dark place.

The quality of 'Troyanska slivova rakya' fruit spirit depends both on natural factors and the geographical environment and on the knowledge that local people have built up over many years. 'Troyanska' slivova rakya' fruit spirit is therefore considered not only to be a mere commodity but also an integral part of a tradition that has been maintained over time, preserved and handed down from one generation to the next.

The Troyan Monastery has played a key role in the development and production of the drink. Fruit-farming and plum production at the monastery are of a very high standard.

Troyan monastery has also been instrumental in the development and spread of plum tree cultivation in the Troyan area. Historical records of fruit spirit (rakia) being distilled in the Troyan region date back to the 14th century, when Troyan monastery was founded. According to legend, it was the monks at Troyan monastery who were the first to distil the drink. The authentic recipe for the drink also included 40 herbs. Having been passed down from abbot to abbot, the secrets of making this elixir, known as 'water of life', eventually spread beyond the confines of the monastery walls to the entire Troyan area.

The first to make their way to the monastery were agronomists and tree nurseries were then established. In 1894, the fruit spirit made by the monks was presented at a competition in Antwerp, Belgium, where it received a bronze medal and established a global reputation.

The drink has been drunk by all eminent visitors to the monastery and to Bulgaria generally, including Pope John-Paul II and US President Bill Clinton.

It is no coincidence that the monastery is depicted on the label used for 'Troyanska' slivova rakya' fruit spirit. This makes the fruit spirit recognisable for consumers. It is Troyan monastery that is considered to be the birthplace of the tradition of distilling the fruit spirit.

Credit for the excellent quality of the raw material used to produce the drink is now due to the Mountain Agriculture Institute in Troyan, a pioneering institution that introduced the Stanley plum into the area, and into Bulgaria as a whole.

- **Link between past and present**

Plums have acquired cult status in the Troyan area. The traditions linked to the production of fruit spirit go back more than a hundred years. For several decades, the mountain town [of Troyan] has hosted a festival known as the Plum and Plum Brandy Festival, which celebrates the amber elixir. This is traditionally held on the last Saturday in September, with a carnival procession, a great deal of humour, a happy atmosphere and tasting sessions and competitions. The winners receive special certificates and unique medals in the shape of a plum. 'Troyanska slivova rakya' fruit spirit is still considered to be the 'most Bulgarian rakia of all'.

'Troyanska slivova rakya' fruit spirit has received 20 gold and 11 silver medals at the following prestigious international tasting competitions (**Annexes 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19**):

Certificate of distinction and gold medal – Ljubljana 1964;

Certificate of distinction and gold medal – Ljubljana 1966;

Certificate of distinction and gold medal – Ljubljana 1976;

Certificate of distinction and gold medal – Plovdiv International Fair, 1993,

awarded for vintage Troyan plum rakia made from plums harvested in 1984;

Certificate of distinction and gold medal – Belgrade, 22 November 1999;

Certificate of distinction and gold medal – AgroExpo 99, Plovdiv;

Certificate of distinction and 2 gold medals – Vinaria 2001, Plovdiv, awarded for matured Troyan plum rakia made from plums harvested in 1987 and old Troyan plum rakia made from plums harvested in 1983;

Certificate of distinction and gold medal – Vinaria 2003, Plovdiv, awarded for matured Troyan plum rakia made from plums harvested in 1983;

Certificate of distinction and 2 gold medals – Vinaria 2007, Plovdiv, awarded for old Troyan plum rakia made from plums harvested in 1989 and for a special reserve rakia made from plums harvested in 1987;

Certificate of distinction and 2 gold medals – Vinaria 2008, Plovdiv, awarded for old Troyan plum rakia made from plums harvested in 1992 and for a special reserve rakia made from plums harvested in 1989;

Certificate of distinction and gold medal – Vinaria 2010, Plovdiv, awarded for old Troyan plum rakia made from plums harvested in 2002;

Certificate of distinction and 2 gold medals – Vinaria 2011, Plovdiv, awarded for old Troyan plum rakia made from plums harvested in 1999 and for special reserve made from plums harvested in 1990;

Certificate of distinction and gold medal – Vinaria 2012, Plovdiv, awarded for special reserve made from plums harvested in 1989;

Certificate of distinction and 3 gold medals – Vinaria 2013, Plovdiv, awarded for special reserve made from plums harvested in 1989, special reserve made from plums harvested in 1994 and special reserve made from plums harvested in 1998;

In the 2012 Spirit Drink of the Year Competition, 'Troyanska' slivova rakya' fruit spirit received the Plum Brandy of the Year award (Annex 2).

In 2006, 'Troyanska' slivova rakya' fruit spirit was awarded a KOSHERCERTIFICATION certificate by the globally renowned Orthodox Jewish certification company STAR K, based in Baltimore, USA.

The certificate guarantees that the entire production process has been monitored by a representative of the organisation and that the end product conforms to Jewish dietary laws. Many international food producers have concluded that Kosher supervision is an indicator of a high assessment as regards the safety and quality of food and drink.



The KOSHERCERTIFICATION certificate has facilitated the export of 'Troyanska' slivova rakya' fruit spirit not only to the USA but also to other foreign markets (**Annex 20**).

As it not granted on a once-only basis but on an annual basis, holding a KOSHER certificate is a guarantee of quality and a sign that continuous efforts are being made to improve quality.

The *Troyanska Baklitsa* magazine, which is dedicated to keeping aficionados of 'Troyanska' slivova rakya' fruit spirit informed of technological innovations and the drink's reputation and domestic market share, has been published since January 2012.

- **European Union or national/regional provisions**

National legislation does not lay down any additional specific requirements concerning 'Troyanska' slivova rakya' fruit spirit. The production of 'Troyanska' slivova

rakya' fruit spirit is subject to the general requirements applicable to the 'Fruit spirit' category.

The specificities of the production process, such as the removal of the stones from the fruit and the minimum three-year period for which the drink is matured in oak barrels with a capacity of up to 1 000 litres are the result of the application of good production practices and traditional production methods.

The specific provisions relating to the definition, description, labelling and presentation of 'Troyanska slivova rakya' fruit spirit are laid down in the Wine and Spirit Drinks Act (ZVSN), published in State Gazette No 45/2012 and in force since 16 September 2012.

The ZVSN also lays down the national procedure for approving spirit drinks with a geographical indication.

The national procedure for approving spirit drinks with a geographical indication is set out in Section VII, 'Production of spirit drinks with a geographical indication' of Chapter Nine, 'SPIRIT DRINKS' of the ZVSN.

A fruit spirit being a plum rakia with the geographical indication 'Troyanska' was approved pursuant to Order No T-RD-27-23 of the Minister for the Economy and Energy of 27 November 2013 (**Annex 21**), which has been published on the Ministry of the Economy's website at:

**<http://www.mi.government.bg/bg/library/zapoved-t-rd-27-23-27-11-2013-g-za-utvarjdavane-na-plodova-destilatna-spirtna-napitka-slivova-rak-531-c28-m361-4.html>**

Pursuant to the ZVSN, a fruit spirit may be placed on the market only if accompanied by a copy of a batch test report issued by an accredited laboratory.

## **Applicant**

— Member State, third country or legal/natural person: Република България, Министерство на икономиката / Republic of Bulgaria, Ministry of Economy

— Full address (street number and name, town/city and postal code, country): ул. Slavyanska 8, 1052 Sofia, Bulgaria

— Legal status (in the case of legal persons):

гр. София 1052, ул. "Славянска" № 8, Република България / ul. Slavyanska 8, 1052 Sofia, Bulgaria

## **Specific labelling rules**

In accordance with the Wine and Spirit Drinks Act, when labelling spirit drinks produced in Bulgaria and intended for the Bulgarian market, the following details must be provided in Bulgarian:

1. the commercial name of the spirit drink;
2. its nominal volume;
3. the 'e' mark, certifying that the quantity of the drink corresponds exactly to that indicated on the label;
4. the actual alcoholic strength of the drink;
5. the number and/or date of the batch preceded by the letter 'L';
6. the number of the technical specification of the drink;
7. the name (business name) and registered office of the producer;
8. the name (business name) and registered office of the bottling company, if the drink has been bottled or decanted into containers with a capacity of up to 60 litres;



9. the number of the producer's registration certificate;

The following optional information may be included when labelling a spirit drink:

1. name of the geographical area in which the drink was produced;
2. name of the fruit or fruits or name of the raw material from which the drink was produced;
3. recommended use of the drink;
4. medals and awards received;
5. maturing and ageing methods used;
6. method of production;
7. number of distillations;
8. information on the history of the drink and the producer;
9. information about persons involved in marketing the drink;
10. commercial name.

A geographical indication may be added after the commercial name of a spirit drink if the production phase, from the harvesting of the raw materials to when the spirit drink acquires its specific or final characteristics and properties, takes place in the specified geographical area.