

## TVISHI

**NUMBER OF REGISTRATION:** 797

**DATE OF REGISTRATION:** 10/12/2007

**APPELLATION OF ORIGIN:** TVISHI

**GOOD FOR WHICH REGISTRATION IS REQUIRED:** Wine

**NAME AND ADDRESS OF APPLICANT:** LEPL - National Wine Agency; Marshal Gelovani Av. 6, 0159, Georgia, Tbilisi

**1. NAME:** "TVISHI"

**2. ADDITIONAL SIGNS:**

**3. TYPE, COLOR AND MAIN REQUIREMENTS:**

"Tvishi" is white demi-doux (hemi-sweet) wine.

- "Tvishi" amber sec (dry) shall satisfy the following requirements:
- Color – light straw to straw;
- Aroma and taste – perfect, delicate, harmonic, having fruit tones and pleasant sweetness characterizing the location;
- Volumetric spirit content – no less than 10,5 %;
- Concentration of finished extract mass – no less than 16 g/l;
- Sugar content – no more than 18-45 g/l;
- Titrated/ Volatile acidity – no less than 5 g/l;
- Other characteristics shall meet requirements provided by the legislation of Georgia.

"Tvishi" white fortified shall satisfy the following requirements:

- Color – light golden to dark amber;
- Aroma and taste – full, harmonic, having aroma characterizing the location, honey;
- Volumetric spirit content – no less than 18 ( $\pm 0,5$ ) %;
- Concentration of finished extract mass – no less than 18 g/l;
- Sugar content – no more than 10 ( $\pm 0,5$ ) g/l;
- Titrated/ Volatile acidity – no less than 4 g/l;
- Other characteristics shall meet requirements provided by the legislation of Georgia.

#### **4. SPECIFIC ZONE AVAILABLE AREAS**

The micro-zone Tvishi is located in Lechkumi, on administrative region Tsageri, on the right bank of the River Rioni, on the coordinates – 42°31' of Northern longitude and 42°54' of Eastern latitude.

The micro-zone includes the villages: Tvishi and Alpana.

#### **5. VINE VARIETIES**

Wine "Tvishi" shall be prepared from the grapes of Tsolikouri, vintage takes place in Tvishi micro-zone. Usage of other varieties is prohibited.

#### **6. VINEYARD CULTIVATION, SHAPE OF PRUNING AND CARE:**

- The micro-zone Tvishi vineyards for wine "Tvishi" shall be situated on 400-600 m above sea level.
- Distance between the rows in the vineyards – 1-2,5 m;

- Distance between the vines in the row – 0.8-2.5 m;
- Height of stem – 60-90 cm;
- Shape of pruning – one-sided or Georgian two-sided or free.

Vine cultivation, shape and pruning, pests and diseases control, and soil treatment, fertilization, and other operations, shall be provided according to agro-technical activities selected by wine-makers.

#### **7. GRAPE MATURITY, VINTAGE, TRANSPORTATION:**

- "Tvishi" shall be produced only with ripe grapes;
- Sugar content shall be no less than 22%, at the vintage;
- Grapes transportation is permitted only with wooden or plastic boxes, with bodyworks made of stainless steel or painted with special colour;
- Usage of polyethylene packages and/or bags is not allowed;
- The grapes shall be protected from dirtying at the transportation.

#### **8. VINTAGE AND WINE PRODUCTION**

Vintage on 1 ha vineyard shall be no more than 10 tons.

Wine production shall be no more than:

- 650 liters – from 1 ton grapes;
- 6500 liters – from 1 ha vineyard.

#### **9. GRAPE PROCESSING, WINEMAKING AND BOTTLING**

Grapes for producing wine "Tvishi" shall be only from the vineyards cultivated in micro-zone Tvishi.

Grapes processing, winemaking and bottling is permitted outside the micro-zone, but only on the territory of Georgia.

At the same time, the grapes and/or wine can be got from the Tvishi micro-zone and the wine can be withdrawn from Kakheti viticulture zone only under strict accounting and control.

"Tvishi" is made by alcoholic fermentation of gravity grape juice.

In the production of wine "Tvishi" it is permissible to use only the operations, materials and substances that are permitted by the Georgian legislation.

"Tvishi" shall be represented on consumer market only packed in the consumer vessels.

#### **10. LINK BETWEEN EXCLUSIVE QUALITY, REPUTATION AND GEOGRAPHICAL AREA:**

**CLIMATE** - The climate in the micro-zone is humid, with cold winter and long-term warm summer. Annual duration of sunlight in the Tvishi micro-zone varies between 1900-2000 hours. During the vegetation period the sunshine continues within 1400-1500 hours. The average annual air temperature of the micro-zone is – +14,2°C, the warmest month – August average temperature is 22,2, and of the coldest month – January – no less than +0,5°C. Sustainable transition to the average daily temperature of 10°C takes place in first decade of April (7.IV), and falling down in first decade of November (2.XI). Thus, duration of vegetation period continues 209 days.

The sum of active temperatures averagely is 3700°C , even more than 3800°C once in 4 years.

The annual sum of atmospheric precipitations is 1095 mm, the precipitations that comes during August is approximately equal of their evaporation. Therefore, in these years the vineyard requires watering in summer time.

During the vegetation period the hailing days number is 0,8 (Tsageri). May and June (0,3-0,3 days) are the months with the most hailing time during the year.

The winds are blow along the Gorge. There is prevailing the South-Western (22%) and Southern (17%) and North-Eastern (12%) winds and perpendicular therefrom – the Northern (14%) and North-Eastern (12%) winds. Other directional winds have less repetition. The average annual wind speed in the specific zone is 1,0 m/s. such zones are belong to weak wind III group regions.

**SOIL** – "Tvishi" production micro-zone is represented in the Western Georgia, in particular – Racha-Lechkhumi mountain area located on the right side of the River Rioni. Relief of these places is relatively slightly and moderately inclined slopes of various exposures with small flat terraces. In general, inclination is mainly directed towards the South-East and East.

There are mainly represented humus-carbonated soils with various varieties different from each other as with profile and the humus layer thickness as with mechanical content, leptosol and stone intensity. Deluvial and grey soils with their varieties are represented in small area.

Humus-carbonated soils mainly presented in mountain area are characterized with profile thickness, leptosol-stone intensity and mechanical composition diversity. Profile thickness is mainly varies within 50-80 cm, and active humus layer is 20-40 cm. In some areas wherein the relief is characterized with great inclination and erosion processes the soils have small thickness – less than 40-50 cm, and active humus layer does not exceed 15-20 cm.

They are developed mainly on lime clays and failed limestone material. Soil mechanical content is mostly heavy loam and clay, wherein physical clay (<0.01mm) fraction varies between 45-75%, and rarely loam with 35-45% clay. Humus content is small 2,5-1,5% in soil active layer and gradually decreases bellow. High-efficient complex fertilizer (NPK) content is small, as well. Hydrolyzed nitrogen content is no more than 6,0 mg in 100 g soil. The soil is poor with soluble phosphorus content and it is represented as a trace.

Changeable potassium content is small too – no more than 10 mg. Calcium carbonate content is in average or small amount, and mostly varies within 2-20%. Soil area reaction (pH) is slightly and moderately alkaline and varies within 7,3-8, 2.

Small area is represented with deluvial soils mainly represented as spots on the lower part of the slopes. These soils are characterized with relatively deep thickness (70-100 cm), and small content of carbonates, and some sections are generally free from carbonates and they are exist in small amount bellow. In

accordance with other characteristics, humus and high-efficient complex fertilizer (NPK) contents are small as humus-carbonated soils.

Relatively small area is also represented with grey soils characterized mostly with medium and small thickness. Soil thickness is mainly varies within 40-80 cm, and the active humus layer is within 20-30 cm, with the mechanical composition it is heavy loam and clay, and the content of physical clay varies mostly within 50-70%. Humus content is small 2,5-1,5% in soil active layer and gradually decreases bellow. Soils are free from carbonates, and area reaction (pH) is neytral and varies within 6,2-7,16,2-7,1. High-efficient complex fertilizer (NPK) content is small as in other varieties of soils.

**HUMAN FACTOR** – "Tvishi" has been produced since 1952, after building of Tvishi winery. Building of winery in Tvishi and the production of this wonderful semi-sweet wine became possible after the famous events of 1942, and development and implementation of naturally semi-sweet wines production technology.

Geographical location favorable for winemaking, microclimate created on the right bank of the River Rioni, diversity of soils, aroma and taste of grape variety Tsoolikouri manifested in this area and rule of its making define special features of wine "Tvishi".

## **11. SPECIAL LABELING RULES:**

With Latin font – TVISHI

Protected Designation of Origin and/or PDO

Cyrillic font – ТВИШИ

Защищённое наименование места происхождения

## **12. ACCOUNTING AND NOTIFICATION**

Accounting and notification  
of production and storage  
technological processes of

"Tvishi" is carried out, in accordance with the rules established by the legislation of Georgia.

### 13. MAIN CONTROLLABLE POINTS

During control of the PDO wine "Tvishi" production process the producer shall satisfy the requirements established by LEPL National Wine Agency, and shall comply with the following parameters:

<b>Main Controllable Points</b>	<b>Evaluation Methods</b>
Vineyard location	Cadaster map, control on the place
Area	Vineyard accounting magazine, cadaster
Vine variety	Vineyard accounting journal, control on the place
Cultivation methods	Journal of registration of Agrotechnical Measures, treating journal, control on the place
Vintage and transportation	Vintage journal
Grape harvest per ha	Vintage journal
Grape harvest in total	Vintage journal
Grape processing and winemaking	Grape receiving journal, grape processing journal, product turnover calculation journal, laboratory analysis journals, notifications, control on the place
Wine bottling,	Bottling journal, journal for motion of ready product in the storehouse, laboratory

packaging and storage place and conditions	analysis journals
Physico-chemical characteristics of the wine at winemaking, before and after bottling	Laboratory analysis journals
Organoleptic characteristics of the wine	Tasting commission protocols
Traceability	Technological and laboratory records

#### 14. CONTROL BODY OF PRODUCTION

State control for observance of production specification and lawful usage of the appellation of origin PDO shall be carried out by LEPL National Wine Agency, according to the rules established by the legislation of Georgia.



