

## AKHASHENI

NUMBER OF REGISTRATION: 4

DATE OF REGISTRATION: 30/08/2005

APPELLATION OF ORIGIN: AKHASHENI

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: "AKHASHENI"**

**2. ADDITIONAL SIGNS:**

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

"Akhasheni" is red, naturally demi-doux (semi-sweet) wine, which shall satisfy the following requirements:

- Color – dark red;
- Aroma and taste – perfect, harmonised, velvet, refined, pleasantly sweet with fruity tones, having taste and aroma of Saperavi grapes;
- Volumetric spirit content – no less than 10.5 %;
- Concentration of finished extract mass – no less than 22 g/l;
- Sugar content – 18-45 g/l;
- Titrated/ Volatile acidity – no less than 5 g/l;
- Other characteristics shall meet requirements provided by the legislation of Georgia.

**4. SPECIFIC ZONE AVAILABLE AREAS**

The micro-zone Akhasheni is located in Inner Kakheti, in the middle stream of the River Alazani, on the coordinates – 41° 48' of Northern longitude and 45° 44' of Eastern latitude, between Alazani tributaries – Chermiskhevi and Vedzirula having longitudinal direction.

The micro-zone Akhasheni covers the forest slopes of Tsiv-Gombori Range to the Alazani channel. The micro-zone includes the middle and upper parts of the villages: Zegaani, Akhasheni and Chumlaki, including Papari fields.

## **5. VINE VARIETIES**

Wine Akhasheni shall be prepared from the grapes of Saperavi and/or Saperavi-Budushuri-like, the vintage takes place in the micro-zone Akhasheni.

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

- The micro-zone Akhasheni vineyards for wine Akhasheni is situated on 350-700 m above sea level.
- Distance between the rows in the vineyards – 1-3 m;
- Distance between the vines in the row – 0.8-1.5 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:**

- Akhasheni 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 "Akhasheni" shall be only from the vineyards cultivated in the micro-zone Akhasheni. Furthermore, usage of about 15% Saperavi grapes brought from outside of micro-zone, but within Kakheti region, is allowable.

Grapes processing and winemaking shall be provided exclusively inside of Kakheti, bottling is permitted outside Kakheti, but only on the territory of Georgia.

At the same time, the grapes can be got from the "Akhasheni" micro-zone and the wine can be withdrawn from Kakheti viticulture zone only under strict accounting and control.

"Akhasheni" is made by incomplete alcoholic fermentation of must.

In the production of wine "Akhasheni" it is permissible to use only the operations, materials and substances provided by the legislation of Georgia.

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

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

**CLIMATE** – The formation of weather in the micro-zone is caused by atmospheric processes developed in subtropical and moderate areas and moved from the East and West longitudes. The climate in the micro-zone is moderately humid, with hot summer and mild winter. The direction of the River Alazani has great importance. Cold air masses move from the North-West to South-East on the foothills of the Northwest slopes of Tsiv-Gombori Range, the gorges, and high tops of Kakheti Caucasus glaciers.

In the micro-zone the formation of grape grains (in the second half of June, July and the first half of August), and clear sky (from the second half of August to the end of September) continues, correspondingly, 16 and 8 days during maturity. The number of days without sun in said periods does not exceed 3 and 1.

Annual duration of sunshine in the micro-zone Akhasheni ranges between 2150-2200 hours. During the vegetation period the sunshine continues 1600 hours. Solar radiation on the right side of the River Alazani, in the micro-zone Akhasheni, is higher than on the left bank of the river, which is due to less cloudiness. Annual radiation in Akhasheni is no more than  $130 \text{ kcal/cm}^2$ , but in the vegetation period it varies within 95-100  $\text{kcal/cm}^2$ . Direct radiation on the horizontal surface is  $75 \text{ kcal/cm}^2$ , and scattered –  $54 \text{ kcal/cm}^2$ .

Depending on the analysis of alluvial carbonate soil temperature, in the depth of 5-50 cm layer, the sustainable transition of temperature above  $10^\circ\text{C}$  occurs in the first decade of April. In a relatively deep (50-100 cm) layer, this term will be moved to mid-April.

Activation of root system begins in mid-May, when the soil temperature increases above  $15^\circ\text{C}$  in 10-120 cm depth of the layer. From the mid-June to the end of September, over three months the soil temperature is above  $20^\circ\text{C}$ , and it reaches  $24^\circ\text{C}$  from mid-July to the end of August, in the depth of 70 cm.

The average annual air temperature is  $12.5^\circ\text{C}$ , at the warmest months (July, August) is  $23.7-23.5^\circ\text{C}$ , and at the coldest month (January) is  $+1.1^\circ\text{C}$ . In accordance with multiannual data, air annual absolute minimum temperature is averagely  $-10, -11^\circ\text{C}$ , and  $+35^\circ\text{C}$  – for absolute maximum, and extreme temperatures are  $+23$  and  $+38^\circ\text{C}$ .

Autumn frosts in the micro-zone start at the end of November (27.XI) and stop from 24.III. In the middle of April the frosts are expected once during 10 years.

In the micro-zone Akhasheni the sum of temperatures is 3950°C on 450 m level, and 3700°C – on 620 m.

Sustainable transition of air temperature above 10°C on 450 m-s takes place from 5.IV, and it's falling – from 4.XI.

Annual sum of atmospheric precipitations is 860 mm in the micro-zone Akhasheni and 637 mm – during the vegetation period. During fruit formation the sediment amount is 250 mm, and moisture content in air layer near soil surface is 765 mm (Gurjaani).

Annual relative air humidity is 71%. Air moisture is the lowest at July (63%) and August (60%), and it is much more increased at the end of the autumn (78%) and winter (76-75%).

During warm period hailing days repetition is sharply reduced than in the Northwestern districts of Alazani right bank (Tsinandali, Telavi). Hailing days number is averagely between 1,6-2,1 per year. May (0,7 days) and June (0,5 days) are the the most hailing months during the year.

Saperavi buds opening takes place in the middle of April and flowering – at the end of May, the grape maturity begins in the second half of August. Grape technical ripening takes place at the end of September.

Snow cover is formed in the last decade of December (from 15.XII), melting – in mid-March. Snow cover is unstable – in 74% of years, the number of snowy days in winter is equal to 26.

In the micro-zone the West (32%) and South-West (23%) winds are prevailing There are approximately 21% windless days, per year. Average annual wind speed is 1,4 m/s. Wind speed is almost equal during all months, and the number of very windy days is only 4.

**SOIL** – The main part of the territory is consisted with slopes and trails slightly and moderately inclined towards the Southwest, North-East and East, it is passing to slightly wavy surface, and then – to flat land towards the North-East direction and borders the first terrace of Alazani, longwise Chermiskhevi and Paprsikhevi.

In the micro-zone there are two types of rendzino-brown soils, two types of alluvial soils and one of deluvial soils:

- Rendzino-brown, very thick, clay;
- Rendzino-brown, moderately thick, somewhere slightly leptosol with clay and heavy loam;
- Alluvial carbonated, very thick, loam;
- Alluvial carbonated, very thick, leptosol, loam;
- Deluvial carbonated, very thick, clay.

Soils of the first two types are found in the extreme Southwestern part of the micro-zone on the North-Eastern slopes of Tsiv-Gombori Range, namely, in the area of Akhasheni on Papari fields and in the South-Western part of the Chumlaki area. The 3<sup>rd</sup> and 4<sup>th</sup> varieties of soils are presented in the central and North-Eastern parts of said villages, on the river Alazani second terrace, along the rivers Chermaskhevi and Papriskhevi, on inclined and flat relief. The 5<sup>th</sup> variety of soil is mainly presented in the central part of the micro-zone, on the ends of the Southern slopes of Tsiv-Gombori Range and it creates slightly inclined trails.

First type soil profile thickness is 70-90 cm, and active humus layer is 50-60 cm. Second type – 60-90 cm, and the active humus layer is 40-50 cm; it is characterized with slightly loamy structure. Both soil types are developed on very carbonated clay-lime layers. The 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> types of soils are characterized with deep thickness of profiles – 1,5 m, and active humus layer is 50-60 cm. They consist of alluvial clay-lime and clay-sand layers. First two types of soils are dark brown to black in the active humus layer. In transitional layer it is light brown to beige, and changes to light beige to white, to the bottom. The 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> soils are light brown and less differentiated. The 4<sup>th</sup> soil has loamy structure, contrary from others.

According to laboratory analysis data, the first two types of soils are characterized with clay and heavy clay mechanical content and the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> types of soils are clay. Humus content of first and second soil varieties is characterized with moderate index in the active layer – 3,5%, usually, and less – below in the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> types of soils relatively low and varies within 1,5-3,0% in active layer. It is poor with hydrolyzed nitrogen, soluble phosphorus and exchange potassium. The first and second varieties of soils contain carbonates in average amount, in upper layers, very high amount – more than 40-50%, below, and average amount in the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> types of soils. Soil area reaction (pH) is characterized with moderate index and mainly varies within 7,5-8,6.

On the basis of conducted studies, agronomic properties of micro-zone soils provide the opportunity to produce high quality material for wine "Akhasheni".

**HUMAN FACTOR** – It is known that Georgian wine companies had neither technological nor technical capabilities to make stable demi-doux wines until the 1940s.

On September 3, 1942, a meeting was held in Tbilisi with the participation of wineries, scientific institutions as well as scientists being in evacuation in Georgia (Professors – M.A. Gerasimov, A. A. Egorov, N.F. Saenko, and others) and winemakers representatives, they were entrusted with elaborating activities to provide and introduce modern wine-making technologies for demi-doux, and not only demi-doux wines.

Implementation of the activities planned at the meeting was entrusted to the Department of Agriculture of the Academy of Sciences, which fulfilled the task excellently – new factories equipped with modern technologies and techniques were built in various micro-zones, including village Zegaani.

Naturally demi-doux wine Akhasheni, created by leading specialists of "Samtresti", has been produced since 1958.

At various international competitions and exhibitions held before 1990, Akhasheni was awarded 11 medals, including 6 gold and 5 silver medals.

Geographical location of Akhasheni micro-zone, the climate characteristic for the region: moderately warm winter and hot summer, moderate amount of atmospheric sediments, diversity of soils, specific features of Saperavi and/or Saperavi Budeshuri-like grape varieties and the centuries-old local tradition of viticulture and winemaking produce the unique organoleptic features of wine Akhasheni, characteristic only of this wine.

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

With Latin font – AKHASHENI

Protected Designation of Origin and/or PDO

Cyrillic font – АХАШЕНИ

Защищённое наименование места происхождения

## 12. ACCOUNTING AND NOTIFICATION

Accounting and notification of production and storage technological processes of "Akhasheni" is carried out, in accordance with the rules established by the legislation of Georgia.

## 13. MAIN CONTROLLABLE POINTS

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

Main Controllable Points	Evaluation Methods
1	2
Vineyard location	Cadaster map, control on the place
Area	Vineyard accounting magazine, cadaster
Vine variety	Vineyard accounting journal, control on the place

1	2
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, packaging and storage place and conditions	Bottling journal, journal for motion of ready product in the storehouse, laboratory 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.



