

## MUKUZANI

**NUMBER OF REGISTRATION:** 2

**DATE OF REGISTRATION:** 30/08/2005

**APPELLATION OF ORIGIN:** MUKUZANI

**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:** "MUKUZANI"

**2. ADDITIONAL SIGNS:**

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

"Mukuzani" is sec (dry) wine, which shall satisfy the following requirements:

- Color – dark (garnet) red;
- Aroma and taste – perfect, full, extracted, velvet, harmonic, having aroma characterizing the location with intensively expressed bouquet of fruit tones developed with aging;
- Volumetric spirit content – no less than 11 %;
- Concentration of finished extract mass – no less than 22 g/l;
- Sugar content – no more than 4 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 "Mukuzani" is located in Kakheti, Gurjaani municipality, on the right bank of longitude gorge of the River Alazani, on the North-Eastern slopes of Tsiv-Gombori Range.

Micro-zone from the South-West to North-East consists of slightly or moderately inclined slopes and trails with slightly wavy surface becoming flat towards the North-East direction and borders the channel of the River Alazani. The micro-zone is closed by Akuriskhevi and Vedzirula gorges, from the North-West and South-East, correspondingly.

The micro-zone includes the villages: Chumlaki, Akhasheni, Zegaani, Mukuzani, Velistsikhe, Vazisubani, Shashiani, Kalauri, Vachnadziani and Kakhpari, till the channel of the River Alazani

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

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

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

- The micro-zone "Mukuzani" vineyards are 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.

Wine 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:**

- "Mukuzani" shall be produced only with ripe grapes. Sugar content shall be no less than 19%, 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 Rkatsiteli and Kakhuri Mtsvane for producing wine "Mukuzani" shall be only from the vineyards of the micro-zone Mukuzani.

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

At the same time, the grapes shall be got from the micro-zone Mukuzani and the wine shall be withdrawn from Kakheti viticulture zone only under strict accounting and control.

"Mukuzani" is made by complete alcoholic fermentation of must.

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

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

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

**CLIMATE** – Climate formation in the micro-zone Mukuzani is defined by atmospheric processes developed in subtropical and moderate latitudes and moved from the East and West. No less importance have the processes caused by local relief conditions, in particular, cold air masses flowing down from Caucasus high top glaciers. The climate is moderately humid, with hot summer and mild winter. In the slopes intended for vineyards the horizon is essentially extensible from the East to West that creates effective radiation regime for vine cultivated on the slopes inclined towards the North-East. Annual duration of sunlight varies within 2150-2200 hours, and during the vegetation period the sunshine continues 1600 hours. Sum of annual radiation is no more than 130 kcal/cm<sup>2</sup>, and 95-100 kcal/cm<sup>2</sup> in the vegetation period. Sum of direct annual radiation is 75 kcal/cm<sup>2</sup>, and scattered – 54 kcal/cm<sup>2</sup>.

The average annual air temperature is +12,5°C, +23.6°C – of the warmest months (July and August) and +1,1°C – of the coldest month (January).

Sum of active temperatures in the micro-zone is +4120-3440°C.

The annual sum of atmospheric precipitations in specific zone, during the vegetation period, is 645 mm, and annual – 870 mm. The precipitations are less at fruit formation period (June, July, August), and vineyards need to be additionally irrigated. The soil is moderately humid and does not need irrigation at the times of grape maturity.

Relative air humidity is 71%. Less humidity is in July (63%) and August (60%), relatively more – in the end of autumn (78%) and winter (76-75%). Snow cover is created in the last decade of December (25.XII), and melting takes place in mid-March. Snowy days amount is 26. Last frosts are finished in 24 March, and once in 10 years can be continued until mid-April.

Period without frosts is continued more than 230 days. Air temperature average annual absolute minimum is -9, -11°C, and can fall to -15°C once in 10 years.

Annual average value of hailing days is 2,1. May and June are the most hailing months (0,7-0,5).

There are prevailing mostly the Western – (32%) and South-Western (23%) Rumb winds. Days without winds are 21%, averagely. At the night till sunrise the cold air masses flowing down from Caucasus high top glaciers strengthen frosts of winter and spring.

The micro-zone Mukuzani belongs to wind impact III group regions. Average wind speed is 1,4 m/s. In the purpose to protect the area the double-row windshield strips cultivation is recommended.

**SOIL** – In accordance of existed data analyses, there are distinguished brown, alluvial and deluvial varieties of soils, with their sub-varieties.

1. Dark brown, moderately thick, slightly leptosol, moderately and slightly clay;
2. Rendzino –brown, moderately thick, slightly leptosol, loam and clay;
3. Forest brown, very thick, slightly leptosol, stony and heavy loam;
4. Deluvial, carbonated, very thick, loam;
5. Alluvial, carbonated, , leptosol and loam.

Very and moderately thick brown varieties of soils are presented in the main part of territory;

Deluvial carbonated – on the center, creating slightly inclined trails on the North-Eastern foothills of Tsiv-Gombori Range.

Thick profile soils depth varies from 80-100 cm to 110-130 cm, in average thickness soils the depth varies from 60-70 cm to 70-80 cm. Active humus layer in thick soil varies from 50-60 cm to 75-85 cm, and from 3-40 cm to 40-50 cm – in the average soils.

Soil mechanical content is moderately, very or slightly loamy, and in some places is moderately loamy. The structure is changed from grainy-solid (in the upper layers) to solid-pea-like from the topsoil towards the bottom. Soil includes the roots, organic waste, lime dots and pebbles.

Calcium carbonates content increases downwards; it is 24% in low layers, but more in rendzino-brown soils low layers.

Humus content is very low everywhere. Hydrolyzed nitrogen, soluble phosphorus and exchange potassium contents are very low. Soil area reaction (pH) is moderately alkaline.

Soil cover represented on inclined trails and developed on the rocks has high content of carbonates. Everything together with exposition, education and climatic conditions give opportunity to produce high quality wine "Mukuzani".

**HUMAN FACTOR** – Viticulture and winemaking exist in Mukuzani micro-zone from ancient times. At the beginning of the 19<sup>th</sup> century, the estate of Aleksandre Chavchavadze became prominent here, being notable for significant capital investments and advanced technologies.

In the second half of the 19<sup>th</sup> century, the abolition of serfdom gave a powerful impetus to the development of this field and economy, in general. Unpaid laborers were replaced with hired workers, the backward and undeveloped area was quickly engaged in the common capitalist relationship, and the process of creation of capitalist-farming households began.

These processes became more tangible for viticulture and winemaking from the 1880s, when the Princes Estates Department massively purchased Kakhetian nobles' estates, including in Mukuzani and Zegaani, and rapidly began to modernize vineyards and cellars.

Said processes were further strengthened from the 1920s, when Georgian scientific centers started functioning in Tbilisi and Telavi. New vineyards were cultivated with grafted saplings, wineries equipped with modern technics were built in Mukuzani and Zegaani, and new technologies were introduced.

Wine "Mukuzani" is produced since 1888 and is considered to be a flagship of Georgian red dry wines. 13 medals, including 8 gold, 4 silver and 1 bronze medals, were awarded to wine "Mukuzani" at various international competitions and exhibitions, until 1990.

Geographical location of micro-zone Mukuzani, characteristic regional climate: mild winter and hot summer, moderate amount of precipitations, diversity of soils, special features of harvested Saperavi and/or Saperavi Budeshuri-like grape varieties, characteristic of this zone and local, centuries-old tradition of viticulture and winemaking provide unique organoleptic features of wine "Mukuzani", characteristic only of this wine.

## **11. SPECIAL LABELING RULES**

The name "Mukuzani" and the sign – PDO (Protected Designation of Origin) on the label, package, in the documents accompanying the wine, and advertising materials, used in foreign languages, shall appear as follows:

With Latin font – MUKUZANI

Protected Designation of Origin and/or PDO

Cyrillic font – МУКУЗАНИ

Защищённое наименование места происхождения

## **12. ACCOUNTING AND NOTIFICATION**

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

**13. MAIN CONTROLLABLE POINTS**

During control of the PDO wine "Mukuzani" 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>
<b>1</b>	<b>2</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
<b>1</b>	<b>2</b>
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
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#### **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.

