

## KAKHETI (KAKHURI)

**NUMBER OF REGISTRATION:** 789

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

**APPELLATION OF ORIGIN:** KAKHETI (KAKHURI)

**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:** "KAKHETI"

**2. ADDITIONAL SIGNS:** "Kakhuri"

### 3. TYPE, COLOR AND MAIN REQUIREMENTS

Wine "Kakheti" color can be white, red, rose and amber, and with sugar content – sec (dry), demi-sec (semi-dry), and naturally – doux (sweet) and demi-doux (semi-sweet), which shall satisfy the following requirements:

Organoleptic and physico-chemical characteristics of wine "Kakheti" must meet the following requirements:

- White sec (dry) wines – light straw, perfect, delicate, soft, harmonic, cheerful, refined, having aroma characterizing the location with meadow flowers tones, fruit tones are developed with aging;
- Red sec (dry) wines – dark red, perfect, full, extracted, velvet, harmonic, having aroma characterizing the location, fruit tones are developed with aging;
- White demi-sec (semi-dry), demi-doux (semi-sweet) and doux (sweet) wines – light straw, perfect, delicate, soft, harmonic, cheerful, refined, having aroma characterizing the location;
- Red demi-sec (semi-dry), demi-doux (semi-sweet) and doux (sweet) wines – dark red, perfect, full, extracted, velvet, harmonic, having aroma characterizing the location and intensive fruit tones;

- Rose wines – from light to dark rose, perfect, delicate, soft, harmonic, cheerful, refined, having aroma characterizing the location;
- Amber wines – from dark amber to tea color, have body, energetic, extracted, velvet, having aroma characterizing the location, at the maceration on “chacha” (must) becoming moderately and softly piquant that creates their uniqueness, purchasing intensive fruit tones with aging;
- Volumetric spirit content
- for sec (dry) wines – no less than 11 %;
- for amber – no less than 12 %;
- for demi-sec (semi-dry), demi-doux (semi-sweet) and doux (sweet) wines – no less than 10,5 %;
- Concentration of finished extract mass
- for white and rose wines – no less than 16 g/l;
- for red and amber – no less than 22 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 viticulture zone Kakheti is located in the South-Eastern part of Georgia, and on the coordinates – 41°-42°15' of Northern longitude and 45°-46°30' of Eastern latitude. The viticulture zone Kakheti is bordered with main range of Caucasian Mountains from the North-East, Kartli Range – from the West, Gareji Plateau and Shiraki Plain – from the South, and Nukhi Gorge of Republic of Azerbaijan – from the East.

Viticulture zone Kakheti includes administrative borders of: Akhmeta, Telavi, Gurjaani, Signaghi, Dedoplistskaro, Kvareli, Lagodekhi and Sagarejo municipalities.

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

Wine "Kakheti" shall be prepared from the grapes of viticulture zone Kakheti.

Wine "Kakheti" white and amber shall be prepared from white grape varieties: Rkatsiteli, Kakhuri Mtsvane, Kisi, Khikhvi, Mtsvivani Kakhuri and Chitistvala.

Wine "Kakheti" red shall be prepared from red grape varieties: Saperavi, Saperavi-Budeshuri-like and Cabernet Sauvignon.

Wine "Kakheti" rose shall be prepared from red grape varieties: Saperavi, Saperavi-Budeshuri-like, Rkatsiteli Rose and Cabernet Sauvignon.

Usage of other varieties is prohibited.

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

- The viticulture zone Kakheti vineyards for wine "Kakheti" is situated on 200-750 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 winemakers.

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

- "Kakheti" shall be produced only with ripe grapes. Sugar content shall be no less than 20% – for sec (dry) and demi-sec (semi-dry) wines, 22% – for demi-doux (semi-sweet) wines, and 24% – for doux (sweet) wines, at the vintage.
- Grapes transportation is permitted only with wooden or plastic boxes, with bodyworks made of stainless steel or painted with special color.
- 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:

- 12 tons for Rkatsiteli;
- 8 tons for Kakhuri Mtsvane;
- 8 tons for Kisi;
- 6 tons for Khikhvi;
- 8 tons for Mtsvivani Kakhuri;
- 8 tons for Chitistvala;
- 10 tons for Saperavi;
- 10 tons for Saperavi-Budeshuri-like;
- 10 tons for Cabernet Sauvignon;
- 10 tons for Rkatsiteli Rose.

Grape harvest on 1 hectare vineyard should not exceed:

The wine solution for "Kakheti" should not exceed 65 decals per ton of grapes.

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

Grapes for producing wine "Kakheti" shall be only from the vineyards cultivated in viticulture zone Kakheti.

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 viticulture zone Kakheti and the wine can be withdrawn therefrom only under strict accounting and control.

"Kakheti" is made by complete or incomplete alcoholic fermentation of grape juice or must.

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

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

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

**CLIMATE** – There are three kinds of agro-climatic zones: subtropical, warm and moderately warm. The side is separated in 15 subzones, in accordance of climate sharpening indicator.

Climate conditions of Kakheti are favorable for quality winemaking. Annual common amount of precipitations is 400-800 mm. Duration of vegetation period is 210 days, average temperature of this period is 18,5°C. Sum of active temperatures is 3500-4000°C. Sunshine duration is 2100-2300 h-s. Hail damaging of some regions is available in the spring and autumn. Second half of summer is characterized with long-term droughts. Winter is mild, cloudy, and a little snowy. Vine damaging long-term frosts (18-20°C) are occurred rarely.

**SOIL** – Outer Kakheti viticulture is presented on the zone situated between the South-Western foothills of Tsvi-Gombori Range and on the left and partly right terraces of the River Iori, on 450-700 m above sea level, and includes the regions of Sagarejo, Gurjaani and Gardabani.

There are mostly presented black (humus) and humus-like soils with their varieties. The big area is represented with brown and meadow-brown soil varieties, and approximately small area – with alluvial-proluvial and deluvial soil varieties.

Said soils are distinguished to each other with morphological and physico-chemical characteristics. Black (humus), humus-like, brown, meadow-brown soils profile thickness varies between 50-120 cm; active humus layer – 30-60 cm, and is characterized with clay and heavy loamy mechanical content. Humus content in active layer varies within 2,5-25%, and even more in some areas. Soil area reaction is slightly alkaline, pH varies within 7,3-8,2.

Alluvial-proluvial and deluvial soils are presented in a small area, mostly along trees and on the slopes bellow. Said soils thickness is more than 1 m, and active humus layer is within 30-50 cm, mostly are characterized with loamy and heavy loamy, leptosol and stony mechanical content in some places, it is carbonated and moderately alkaline, pH is 7,5-8,3, humus content mostly is 1,5-2,55.

Inner Kakheti zone includes the territories of Gurjaani, Akhmeta, Kvareli, partly Sighnaghi, Tsiteltskaro and Lagodekhi, disposed on left and right banks of the River Alazani and ending its second terrace and the North-Eastern and North-Western slopes of Tsiv-Gombori Range. The zone is situated between the Southern foothills of Caucasus Mountains and the North-Western and North-eastern slopes of Tsiv-Gombori Range, on 350-750 m above the sea level.

Brown, meadow-brown, humus, humus-like, alluvial-proluvial and deluvial soils with their varieties are presented in Inner Kakheti zone.

Thickness of profile of brown, meadow-brown, humus and humus-like soils varies within 60-120 cm, active humus layer – 30-60 cm; they are loamy and clay – with mechanical content, leptosol and stony on some places, moderate and slightly carbonated. Soil area reaction is moderately and slightly alkaline, and pH varies mostly within 7,2-8,2. Humus content is active layer mostly is 2,0-4,0%, and gradually decreases bellow.

Alluvial-proluvial and deluvial soils are presented on both sides of the River Alazani, their profile thickness is more than 1-1,5 m, active humus layer varies within 40-60 cm; they are characterized mostly with loamy and heavy loamy mechanical content. The soil in some places is slightly loamy and sandy, humus content in their active layer is 1,5-2,5%, and gradually decreases bellow. Carbonates are in small amount (4,5-25,0%) in alluvial-proluvial and deluvial soils presented on right bank, it is doesn't exist in left bank, but can be in a

small amount (0,5-2%) as exception. Soil area reaction pH varies within 7,3-8,2 in the soils on right bank, and – 6,2-7,0, on left bank.

**HUMAN FACTOR** – On the basis of historical-ethnographical and archeological research it is identified that viticulture and winemaking branch has 8000-year-old history in Georgia.

The first significant materials of research and description in this field belong to Vakhushti Bagrationi (XVIII).

From the beginning of the 19<sup>th</sup> century, after the occupation of Georgia, the Central Authority of Russia started development of viticulture and winemaking. To increase the efficiency of this field, Hungarian researcher Martin (1807), then adviser of Caucasus region – Stephens (1811) and others were instructed to study the existing situation. In the same period about 90 vineyards were moved into the Treasury possession.

In the 18<sup>th</sup>-19<sup>th</sup> centuries in Georgia there functioned big and famous viticulture and winemaking households, such as the estates of Princes A. Chavchavadze, A. Jambakur-Orbeliani, S. Leonidze, General Mirskiy, Z. Jorjadze, the Orbelianis, Chijavadze, S. Vorontsov, Mukhran-Batoni, D. Chavchavadze and others. By the end of the century these estates almost wholly moved into the possession of the Princes Estates Department, where the vineyard agriculture as well as winemaking technology was significantly better.

Especially fast development of the field began from the 1920s, after carrying out several effective reforms in agriculture. In the same period, the serious problems caused by Phylloxera were overcome, and planting of new vineyards with grafted vines began:

In 1890 "American Vine Nursery" in Sakara was created;

In 1922 Kakheti viticulture-winemaking trial station was set up in village Uriatubani, Gurjaani district;

In 1920 the Chair of Viticulture and

in 1925 the Chair of Winemaking was opened at Tbilisi State University;

In 1930 the Agricultural Institute was created;

In 1931 the All-Union Scientific-research Institute of Viticulture and Winemaking was set up, which in 1932 was moved to Telavi, Kakheti:

From the 1920s scientific activity began.

Development of the field is greatly indebted to Georgian scientists: Solomon Choloqashvili, Konstantine Modebadze, Valerian Kantaria, Maksime Ramishvili, Revaz Ramishvili, Valeria Ghvaladze, Andro Lashkhi and others.

The field of viticulture and winemaking was gradually staffed with scientists educated at these scientific centres by these famous scientists, who developed the field, implementing new technologies and installing modern equipment, creating new brands of wines, such as "Tsinandali", "Gurjaani", "Napareuli", "Teliani", "Vazisubani" etc.

Geographical location of viticulture zone of Kakheti, regional climate: mild winter and hot summer, normal amount of precipitations, soil diversity, special features of grape varieties and local centuries-old tradition of viticulture and winemaking define the high reputation and organoleptic features of wine "Kakheti" wines.

## **11. SPECIAL LABELING RULES**

With Latin font – KAKHETI

Protected Designation of Origin and/or PDO

Cyrillic font – КАХЕТИ

Защищённое наименование места происхождения

## **12. ACCOUNTING AND NOTIFICATION**

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

## **13. MAIN CONTROLLABLE POINTS**

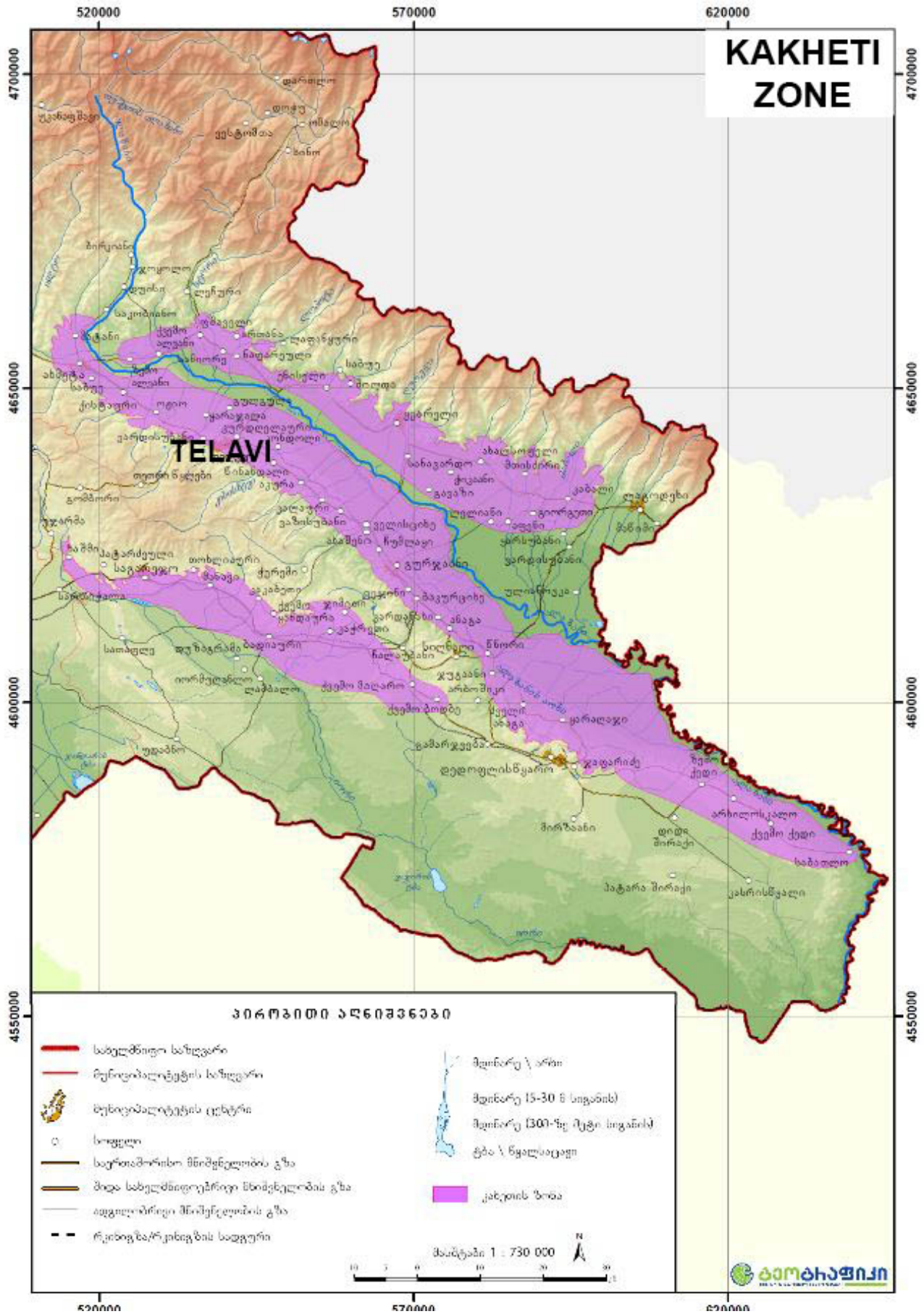


During control of the PDO wine "Kakheti" production process the producer shall satisfy the requirements established by LEPL National Wine Agency, and shall comply with the following parameters:

<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, 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.



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