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**GEOGRAPHICAL INDICATIONS JOURNAL**



बौद्धिक सम्पदा  
भारत  
INTELLECTUAL  
PROPERTY **INDIA**

भौगोलिक उपदर्शन पंजीकृति,  
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**Geographical Indications Registry,  
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**GOVERNMENT OF INDIA**  
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**G.I. APPLICATION NUMBER – 240**

Application Date: 29-07-2011

Application is made by **Kolhapur Sheti Utpanna Bazar Samiti**, Shri Shahu Market yard, Kolhapur 416005, Maharashtra, India provide for Registration in Part A of the Register of **Kolhapur Jaggery** under Application No: 240 in respect of Jaggery, falling in Class – 30 is hereby advertised as accepted under Sub-section (1) of Section 13 of Geographical Indications of Goods (Registration and Protection) Act, 1999.

- A) **Name of the Applicant** : **Kolhapur Sheti Utpanna Bazar Samiti,**
- B) **Address** : **Kolhapur Sheti Utpanna Bazar Samiti,**  
Shri Shahu Market yard, Kolhapur 416005,  
Maharashtra, India
- C) **Types of Goods** : **Class - 30 – Jaggery.**
- D) **Specification:**
- Kolhapur is the main market for Jaggery in the country as it ranks first in qualitative terms and second in terms of quantity. Sugarcane seeds preserved by the Farmers' community by age old practice form the prime factors for good quality Jaggery.
  - Kolhapur jaggery contains no chemicals. It tastes sweet and has longer shelf life as compared to the Jaggery produced in other areas of the country.
  - Jaggery is rich in Iron, Calcium, Carotene and other minerals and contains vitamin A, B and C.
  - In Ayurvedic medicine system jaggery is used preferentially in medicine. It is used as medicine for problems such as acidity, cold and cough, joint pains, urinary tract and bowels; invigorates tones and improves digestive power; and cures itching and prameha, thus useful to cure many more diseases.
  - Jaggery is widely used in the Indian cooking including those of the South Indian and Gujarati cuisines, like rasam, dal and sambar. In addition to its consumption in the raw form, it is used in the traditional dishes where it lends a touch of sweetness to the sour and spicy preparations.
  - It is used in the preparation of alcoholic beverages and to make items like candy, toffees, jaggery cakes and other similar sweet preparations like chikki.
  - Its regular usage is advocated in the daily diet as it is a healthy and unrefined form of sugar.
  - Jaggery is used for the coating of insides of a tandoor oven to enable better flavor of dishes.
  - Jaggery is also used as animal fodder.

Main Forms of Kolhapur Jaggery:

- Solid Jaggery
- Powder Jaggery
- Liquid Jaggery (kakvi)

**E) Name of the Geographical Indication:**

**KOLHAPUR JAGGERY**

**F) Description of the Goods:**

- Kolhapur jaggery is white and golden (reddish brown) color chemical free, pure and hygienically produced.
- Made from fresh sugarcane juice gives permanent sweet taste
- No added color, non harmful and recommended chemicals, additives and flavors
- Natural sweetener and contains glucose, vitamins, calcium, minerals.
- It conveys/suggests that the Geographical Origin is the entire area of Taluka Kolhapur, Dist. Kolhapur, Maharashtra, India.

**Appearance of Goods:**

- Kolhapuri Jaggery has an attractive appearance, various in shapes, excellent taste, attractive yellowish golden colour and good transport quality.

**G) Geographical Area of Production and Map as shown in page no. 92 :**

The rivers having their origin in Saydhari Mountain ranges flow calmly, long distance and with high speed on Kolhapur plateau. The land from these areas is formed from basalt rock disintegration. The Kasari River stream is wide and receives its water source from a fairly large triangular area lying between watersheds of the Vishalgad range because of which its river basin has become quite big and wide. Also, the depth of the Bhogavati river basin is increasing in the middle area and the floor gets increasing in width and when Tulsi and Kumbi River met Bhogavati its valley floor has widen more. Because of the uniqueness of the rivers basins that they are quite big, deep and wide, huge amount of alluvial soil is stored in its river basin and on both sides of river bank which is rich in high quality soil and abundance of minerals and thus, make the land of Kolhapur fertile and unique, making it highly rich and beneficial for cultivation of quality sugarcane.

**Geographical Possition:**

1. Latitude : 16 - 43'N
2. Longitude : 74 - 14'E
3. Elevation : 574 m above MSL

**H) Proof of Origin (Historical records) :**

Maharashtra is famous in jaggery production business since, 18<sup>th</sup> century. Kolhapur was famous for its Kolhapuri gud. In 1886 Chatrapati Shauh Maharaja took efforts for establishment of First market yard of jaggery for its all requirement and services fulfilled by them. Kolhapur is famous in our country and globally for a quality jaggery .In Kolhapur division out of total production of sugarcane nearly 27% used for jaggery production. But, at state level only 11% of sugarcane used for jaggery production. In Maharashtra other than Kolhapur division Karad, Nira-Baramati, Daound-Indapur, Sangli are also produce the quality jaggery (together with its neighbouring districts Sangli and Satara for the production of best quality of jaggery.)Today Jaggery from Kolhapur are

being exported in great quantities Europe, Middle East Asia, and parts of South East Asia. (In 44 countries).

**(I) Method of Production:**

The quality of Jaggery is determined by quality of sugarcane and the process of Jaggery making. Few important Factors affecting quality and marketing of Jaggery produce are as shown below:-

- **Soil**
- **Variety of Sugarcane**
- **Irrigation**
- **Fertilizer**
- **Maturity**

**Soil:**

Elevated, well-drained soils are well suited for growth of Sugarcane crops. Salt free(less than 0.5%) Loamy Soil is preferable for obtaining good quality sugarcane. PH level of soil 6.5-7.5 is necessary, in this kind of soil Sugarcane rapidly grown up. Therefore quality of Sugarcane juice remains good. From that kind of sugarcane we can manufacture good quality of Jaggery and that type of Jaggery can be stored for long time.

**Variety of Sugarcane:**

The best varieties of Jaggery and its product should possess physiological Characteristics like few nodes, long inter nodes, low proportion of rind tissue, yellow white Colour, and soft stem at the same time it should have high sugar with low molasses, coloring and colloidal materials. Large number of sugarcane varieties have been screened for jaggery and the following varieties have been found suitable for making of jaggery:

Early:	1) COC671Vasant;	2) CO 8014 Mahalaxmi;	3) CO 7219 Sanjivani
Mid late:	1) COM 7125	2) CO 740	3) COM 88121
Late:	1) CO 740	2) COM88121	3) CO 7527

Varieties with brix hydrometer reading of more than 19 and purity of more than 85% are suitable for making jaggery.

**Irrigation:**

In water management total requirement of water is depend on sugarcane crops. Water supply at the right time and in equal proportion is essential and for the field constriction all these things are important. Sugarcane is long term crop. Therefore, Sugarcane need to 52h.cm, without seasonal sugarcane needs 300 to 325h.cm, year gap sugarcane required 325 to 350h.cm . Generally soil needs water after 50% of evaporation water from the soil. Sugarcane crops needs water in summer after every 10 days, in rainy season rains may not or less at that time 14 to 15 days and in winter after 18 to 20 days. It depends on the growth of sugarcane crop at the first stage crop needs 5h. cm, at the time of fast growth crop needs water 7 to 8h.cm. And at the time of maturity 5 to 6h.cm crops required water. Modern irrigation methods are also useful for sugarcane crops as well as it help to save water. Before 15 days of cutting the sugarcane supply of water is stopped.

**Fertilizer:**

Fertilizer application should be as per soil analysis of N P K levels. Out of total expenditure on production of sugarcane 30 to 35 % spent only on fertilizer. For it we should know scientifically method for which fertilizer, at which time and which manner is necessary. After soil analysis use of chemical and organic fertilizer in equal balancing is necessary.

**Maturity**

For the production of quality jaggery have in need of good quality sugarcane juice and its all depend on maturity of sugarcane. If jaggery is made from immature sugarcane its result of low quality production jaggery and it is also not good for storage. Therefore, after the maturity cutting of sugarcane is starting.

**Processing and Manufacturing of Jaggery:**

- Sugarcane being the only ingredient of jaggery is produced on a large scale in Kolhapur. The seeds to be sown for the sugarcane crop are specially selected which are useful for the manufacturing of jaggery. The cutting of the cane takes place after a year when the crop of sugarcane is fully developed. Because of the value of the soil and the geographical atmosphere of Kolhapur, It adds to the sweetness and its long-lasting capacity of the cane. The most important aspect of the jaggery units in Kolhapur is that they are situated in the farms itself. Therefore the transportation of the cane takes place immediately to these jaggery units. This not only saves the time but the transportation cost and also benefits the farmers.
- Because of the cutting and immediate utilization of the cane for the production of jaggery in the units maintains the freshness of the cane juice. This immediate utilization maintains the quality of the juice and maximum quantity of the juice can be extracted.

**Steps Involved for the Manufacture of Jaggery:****PART A**

- Firstly the fresh sugarcane is crusher in the sugarcane crusher and the fresh juice is extracted and the same is properly filtered to maintain the quality and hygiene. This extracted juice is stored in the tank. The pH of this juice is approximately 5.2 to 5.3 and the same is stored for 2 to 3 hours. The deposits and insoluble impure substances get separated automatically as the juice is kept stable.
- After storing, the juice is heated in a churner at boiling temperature. The said churner has a capacity of 1000 liter. The juice pH value is averagely recorded as 4.8 to 6.0. Calcium carbonate (150- 200gm /1000litre) developed ladyfinger podwer/ sibblings is mixed in this said churner along with **baggies**. This helps to remove the impurities. First dirt (**Dhor** dirt) is removed at this stage when the temperature reaches 85<sup>0</sup>C.
- The juice is further boiled in the churner. The juice pH is averagely recorded as 5.5. Phosphoric dilute acid (without arsenic) 150-200 ml/1000 Lt. is mixed in the juice contained in churner. At this stage, second dirt (**Son** dirt) is removed at 99<sup>0</sup>C.
- The above mixture of juice is then used to prepare Liquid Jaggery(part B) and solid jiggery (part C)

**PART B-Liquid Jaggery Making Procedure:**

- The temperature of the liquid jaggery in the churner is maintained at 105-106<sup>0</sup>C.
- This hot syrup is cooled down in the churner.
- This clod syrup is kept stable for 72 hrs in packed barrels. This helps to removes the impurities.
- The pure syrup is then is boiled giving low heat and citric acid (0.04%), potassium meta bisulphite (0.01%) or benzoic acid (0.5%) is mixed in the same. This removes all the impurities.
- This clean syrup is then filled in the clean liquid jaggery germ free bottles and the bottles are sealed to make them air tight.
- The information is labeled on the said bottles and kept in the storages, which thereafter, reaches traders and consumers.

**PART C-Solid Jaggery:**

- The above juice (as described in part A) is further boiled in the churner and edible oil 200ml/1000 Lt. is mixed in the same. The temperature of the syrup is 106<sup>0</sup>C. The said syrup solidifies when it reaches 118-120<sup>0</sup>C. It is then inspected properly and the churner is removed from the fire.
- The first stirring of the said hot syrup is done by giving it cold blowing till its temperature drops down to 96<sup>0</sup>C and further, the second stirring till the temperature drops down to 91<sup>0</sup>C.
- When the temperature reaches 76<sup>0</sup>C, the said hot thick syrup is filled in the jaggery containers and thus, the jaggery is ready to consume and stored in clean and hygienic places. The same is purchased by the traders and therefore, by the consumers.
- The Kolhapur jaggery is thus, processed and manufactured in clean and hygienic conditions. No harmful chemicals are used in this process. The sweet and fresh cane of Kolhapur not only maintains quality and endurance, but also adds to its taste making is superior and unique maintaining the important natural nutrients and also making it a healthy to human consumption and body.

**(J) Uniqueness:**

- The perennial rivers that flow down from the mountains brings abundantly along with them making the soil of Kolhapur rich in minerals and increases the nutrient value leads to quality Jaggery.
- The rivers arising from the Sahyadri Mountains having sweet water makes the sugarcane crop of Kolhapur sweet and distinctive.
- The atmosphere of Kolhapur region is 30-37<sup>0</sup>C (winter /summer) and therefore, the sugarcane grows quickly in the humid atmosphere.
- Because of salt free water from rivers, Kolhapur Jaggery's taste, color and its durability is maintained.
- Color body proportion is less in Kolhapur jaggery compared to others, while preparing jaggery. Thus, the colored impurity is easily removed to maximum extent.
- Kolhapur Jaggery contains carbohydrates in large quantity.
- Kolhapur Jaggery is white and golden colored chemical free pure and hygienically distinguishing it from other chemical used jaggery.

- Kolhapur Jaggery contains Glucose, Minerals, Calcium, Vitamins, Iron, Phosphorous, Protein, Copper, etc. vital for human body.
- The traditional jaggery blenders are specialized in the blending it to light red-brown colour as required.
- Kolhapur jaggery is prepared under most hygienically environment and scientifically packed with no added Chemicals, Colors, Additives and Flavors.
- One notable aspect is that the seeds used for sowing of sugarcane are specially made by the name Panchganga after the Panchganga river in Kolhapur because of the the benefits of soil and minerals received from the said river and its sources.

#### 1. **Geographical Area:**

In the sea lap and at a height of sea level ground, on the rich soil of Maharashtra's west side, having a **regul** black soil, Kolhapur is the successor of these geographical attributes. Also, perennial flowing of rivers in the sea lap, wind coming from the sea, hot n humid atmosphere plays an important role in the making of sugarcane.

#### 2. **Humidity:**

The hot and humid climate suits the sugarcane crop the most. It is useful in extracting sugar. The clear sunrays are favorable for the sugarcane growth and the south-west monsoon rains prove useful. The nitrate in the air falls on the soil through rains and thereby, the crop gets a natural nitrate. The grown of sugarcane stays uniform. The atmosphere of Kolhapur region is 30-37<sup>0</sup>C and therefore, the sugarcane grows quickly in the humid atmosphere. It ripens in winter and growth of new sugarcane increases. The yield of sugarcane increases due to abundant rainfall, nutritious hot and humid atmosphere.

#### 3. **Water:**

Sugarcane needs water throughout the year and Kolhapur is blessed with the same. The rivers arising from the sea having sweet water makes the sugarcane crop sweet. The taste of sugarcane is very important for Jaggery and therefore, it is equally important that the water should not be salty. Coincidentally, the rivers that flow down from the mountains brings abundantly along with them rich minerals and Humasta, minute food particles because of which the crop gets sweet salt less water. This develops the jaggery taste, colour and its durability.

#### 4. **Soil:**

For the production of jaggery, it is necessary that the land for the sugarcane crop should be very fertile. For the production of jaggery in the Kolhapur region, the reddish (**regul**) black soil along the river bank which is rich in minerals is used by the agriculturist and therefore, the said particular type of land hold importance in the cultivate a high quality jaggery. Kolhapur is spread on the banks of Panchaganga, Bhogavati, Tulsi, Kumbhi, Kasari, Doodhganga, Varana, etc rivers. The land from these areas is formed from Basalt rock disintegration. Likewise, the red land soil alongside the river bank is highly rich in minerals. During rainy season, these rivers bring with their flow rich minerals, components like humus and make the river banks of Kolhapur rich in soil.

#### **Chemical Free Jaggery:**

In ordinary jaggery, chemicals or used in more or les quantity (Jaggery which is made by chemical mixtures). Because of which the jaggery get dark yellow colour, but it



affects the taste and it reduces its lasting capacity. This chemically made jaggery is harmful for the human beings to some extent. Chemicals like sodium Hydro sulphide, phosphoric acid; etc is used in this jaggery. These days there is a high demand of quality and healthy food. The consumers of all class are aware and concerned about the same and which is their right too. The nutrients remain intact in the non-chemical jaggery. The natural sweetness of the said jaggery increased and keeps its quality intact. Therefore, efforts should be that more and more non-chemical jaggery should be produced and along with India, it should be send to other countries too.

#### **K) Inspection Body**

Kolhapur Sheti krushi Bajar Samiti formed a special inspection body through a resolution by jaggery farmers, it included farmers, agri scientist, legal fraternity and representatives from Government research institutes.

#### **L) Others:**

Jaggery is a traditional unrefined non-centrifugal sugar consumed in Asia, Africa and South America. It is made for direct consumption. This type of sugar is a concentrated product of cane juice without separation of the molasses and crystals, and can vary from golden brown to dark brown in color. It contains up to 65-85 % sucrose, up to 10% Glucose, moisture content of up to 5-8 %, and the remainder made up of other insoluble matter such as ash, proteins and fibers.

The Indian state of Maharashtra is the largest producer and consumer of jaggery. In Maharashtra most vegetables curries and dals contain jaggery. Jaggery is specially used during Makar Sankranti for making sweetmeat called tilgul . In rural Maharashtra, water and a piece of jaggery is given when someone arrives home from working under a hot sun. Kakvi, a byproduct from production of jaggery, is also used in rural Maharashtra as a sweetener. It contains many minerals not found in ordinary sugar and is considered beneficial to health by the traditional medical system Ayurveda. Jaggery made from sugarcane contains vital nutrients like: Glucose, Calcium, Iron, Phosphorus, Protein, Copper etc.

#### **Benefit of Jaggery**

- Jaggery is made in the natural way and no chemicals are used for its processing for which it does not lose its original properties. Hence it is rich in important mineral like salts: 2.8 gms/ 100 grams, whereas only 300 mg/ kg is obtained in refined sugar.
- Magnesium present in jaggery strengthens our nervous system and helps to relax our muscles and gives relief from fatigue and take care of our blood vessels. It also along with selenium acts as an antioxidant property scavenge free radicals from our body.
- The potassium and low amount of sodium present in it maintain the acid balance in the body cells and also combats acids and acetone and control our blood pressure.
- Jaggery is rich in iron, and helps to prevent anemia. It also helps to relief tension take care of asthma as it has anti allergy properties .It is good for migraine and is good for girls those who do not get free flow at the time of their period. Even at the time of post pregnancy it has great benefits to perform to remove all clotted blood from the body of a woman within post 40 days after the birth of a baby.
- The preventive ability of jaggery on smoker's smoke-induced lung lesions suggest the potential of jaggery as a protective food for workers in dusty and smoky atmosphere

even for those who are engaged in woolen industries, the wool dust clogged in the food pipe could be cleared with jaggery. Thus we may conclude saying that those who are exposed to higher levels of pollution. Jaggery helps them to breathe easier and counter pollution problems naturally.

- It has moderate amount of calcium, phosphorous and zinc so it helps to optimum health of a person .along with all its benefits it purifies the blood and prevent rheumatic afflictions and bile disorder thus help to cure jaundice (take pre soaked jaggery juice).
- It is good for Dry Cough, Cough with Sputum, Indigestion, and Constipation too.

Kolhapur is the only place in Maharashtra where near about 25,000 farmers and their dependents are involved in Jaggery production. They produce around 9 lakh quintal Jaggery per year.

