Product Specification on Longjing Cha

1-Name of the Product

龙井茶 Longjing Cha

2-Product Description

Longjing Cha is famous for its green color, rich aroma, sweet after taste, and beautiful appearance. The great sensory quality of Longjing Cha can be judged by the appearance of dried tea leaves and the quality of steeped tea leaves, specifically from the perspectives of its shape, fragrance, taste, color of the brewed tea liquor and the conditions of the steeped tea leaves.

Longjing Cha is a product of green tea which is produced in the following areas: district of Xihu (Scenic Spots and Historic Sites of Xihu) of Hangzhou City, the counties or districts in Hangzhou city including Xiaoshan, Binjiang, Yuhang, Fuyang, Lin'an, Tonglu, Jiande and Chun'an, the counties or districts in Shaoxing City including Shaoxing, Yuecheng, Xinchang, Shengzhou, Zhuji, and towns in the counties of Shangyu, Pan'an, Dongyang and Tiantai. Longjing Cha is a kind of tea with flat appearance on specific tree breeds processed with unique techniques.

Longjing Cha has been renowned for its green color, rich aroma, sweet after taste, and beautiful appearance.

See Table 1 for the requirements on the sensory qualities of Longjing Cha

Table 1 Requirements on the Sensory Qualities of Longjing Cha in Different Grade

Item	Special	Grade I	Grade II	Grade III	Grade IV	Grade V
Appearance	Flat,smooth, straight and sharp; tender green and fresh; even, complete and solid in texture; clean	Flat, smooth, relatively moist, straight, tender green and relatively fresh; even, complete, sharp; clean	Flat, straight, relatively smooth; green and fresh; even and complete, relatively clean	Flat, relatively smooth and relatively straight; relatively green and fresh; relatively even and complete, relatively clean	Flat with slight difference in broad-leaves; light deep green; relatively even; slight greenish yellow leaves	Relatively flat with slight broad-leaves in thickness; deep green; relatively even; fragments with blue green shell

Aroma	With lasting fragrance	With relatively lasting fragrance	Fragrance	Relatively fragrant	Pure	Mild
Taste	Brisk and sweet	Pure and brisk	Relatively brisk	Relatively mellow	Relatively mellow	Realtively pure
Liquor colour	Tender green, bright and clear	Tender green and bright	Green and bright	Relatively green and bright	Yellow green and bright	Yellow green
Infused leaf	Complete bud with leaves, tender, even, tender green and bright in color.	complete bud with leaves, tender, tender green and bright in color.	Tea leaves are barely complete, tender, green and bright .	Tea leaves are barely complete with tender single leave, light green and barely bright .	Tea leaves are barely tender and even with green leaves, barely green and clean .	Tea leaves are barely tender, less even, with blue leaves, slight deep green.
Other requirements	Free from mould, pollution or peculiar odor.					
	Product should be clean without manual coloring. It should not be mixed with other non tea substances. It cannot contain any additives.					

See Table 2 for the physiochemical index of Longjing Cha.

Table 2 Physiochemical index

Item	Special , Grade I and Grade II	Grade III, IV and V
Water /(%) ≤	6.5	7.0
Total ash content / (%) ≤	6.5	7.0
Water extraction (%) ≥	36.0	
Powder and broken tea (%) ≤	1.0	

Sanitation standards: should match the national required sanitary Standards.

3-Defenition of the Geographical Area

The growing region of Xihu covers the district of Xihu (Scenic Spots and Historic Sites of Xihu) , Hangzhou City, Zhejiang Province; the growing region of Qiantang includes the areas in the counties (cities or districts) of Xiaoshan, Binjiang, Yuhang, Fuyang, Lin'an, Tonglu, Jiande, Chun'an of Hangzhou City; and the growing region of Yuezhou refers to areas in the counties (cities or districts) of Shaoxing, Yuecheng, Xinchang, Huangzhou , Zhuji, and towns in the counties of Shangyu, Pan'an, Dongyang and Tiantai . All the above three growing regions (Xihu , Qiantang and Yuezhou) are designated regions of Longjing Cha GI product with uniform conditions.

4-Proof of origin

The Certificate for Geographical Indication Plantations of Longjing Cha are the special proof for the authentic Longjing Cha.

The owner of a tea plantation should report the area of the plantation, its location and yield to the Longjing Cha Administration Office to obtain the Certificate. All the Longjing Cha should include Certificate for Geographical Indication Plantations. This certificate is to prove that the Longjing Cha materials (fresh leaves or primary tea) are produced from the geographical indication area. Tea trees are planted and cultivated according to specific standards in the plantation and records which are established for the production of fresh tea, sales and planting activities.

The processing units should verify the Certificate for Geographical Indication Plantations of Longjing Cha when purchasing fresh leaves or semi-finished products (primary tea) of Longjing Cha. Relevant records on material purchase and sales should be established. Processing should be conducted by strictly following the techniques stipulated in the standards. Processing plants should have workshops, warehouses and places that match their production capacity and comply with the national sanitary standards.

The vendors should verify the Certificate for Geographical Indication Plantations of Longjing Cha when purchasing products and establish and implement the system of inspection of product purchases for approval, product certificate and other labels.

5-Production Method

1. Tea garden farming

Shallow plowing: should be conducted during the growing seasons of tea trees with a depth of 10 cm-15 cm.

Deep plowing: should be conducted after the harvest in the tea gardens in autumn with a depth of 20 cm-30 cm.

Fertilization in tea gardens: Fertilization periods: fertilizer is applied to accelerate

germination of the spring tea, usually in the last 20 days in February; after the harvest of spring tea, additional fertilizer is applied usually between the last ten days of April and the second ten days of May; top application of fertilizer is conducted in stages before the autumn tea, usually between the last ten days of June and the second ten days of September; and basal fertilizer should be applied in combination with the deep plowing in autumn and winter, usually between October and the first ten days of November. Types of fertilizers: basal fertilizer should be mainly composed of organic fertilizer, phosphorus and potassium; additional fertilizer should be mainly composed of inorganic nitrogenous fertilizer. For the young tea garden, Phosphorus and potassium fertilizer should be the main fertilizer and complemented by nitrogen fertilizer., For the productive tea gardens, nitrogen fertilizer should be mainly applied in productive and complemented by phosphorus and potassium fertilizers. Generally speaking, pure nitrogen of 30-45 kg should be applied for every 100 kg of dried tea production, complemented by phosphorus and potassium fertilizers at a 3-1-1 ratio of nitrogen-phosphorus-potassium.

2. Picking of fresh leaves

Harvest starts when there are 10-15 tea buds which can satisfy the quality requirements for fresh leaves per square meters in the bush surface of tea plant. Spring tea should be picked every day or every other day, while the harvest intervals for summer and autumn tea can be slightly prolonged. The followings are the picking techniques: harvests should be conducted in multiple rounds and in multiple times; picking with lifting hand, which is to pick with the palm facing down, nip the tender stem on the pisciform leaf with the thumb and the index finger, turn the wrist upward to have the bud fall into the palm; it is forbidden to pinch, scratch, rub palm along the branch, and pick buds with old leaves. ..

3. Transportation and storage of fresh leaves

Fresh leaves should be put in baskets with good ventilation. Transportation vehicles should be clean and sanitary with no exposure to sunlight or rain during the transportation. During the transportation, the leaves should not be transported together with other goods with peculiar smell or of toxic nature. Fresh leaves should be transported to processing plants within four hours after picking. During loading, transportation and storage, they should be handled with care and no pressure applied

4. Processing

Traditional tea frying stove, electric frying stove and other processing machines can be used. Traditional hand movements including grasping, shaking, joining, raising, stroking, pushing, clasping, flinging, grinding and pressing are adopted in manual processing while techniques in mechanical processing should comply with the requirements for processing Longjing Cha.

Processing techniques: Slight withering→Qingguo→cooling and moisturing →Huiguo.

Qingguo (drying wok): the work temperature should range from 90 ℃ to 100 ℃, following the rule of high first and low later. The quantity of tea buds put into the wok according to their qualities: 100 g-150 g for premium tea , 150 g-200 g for Grade I and II, and 200 g-250 g for Grade III and lower. The process lasts 12 mins to 14 mins. When the tea leaves show a even bright green or tender green color, become straight and separated from each other and almost 70% of moisture is evaporated, they should be removed from the wok. The hand movements of grasping, shaking, rubbing, joining and stroking are adopted to make the tea leaves gradually wrap-up and flatten with pressure from light to heavy.

Huiguo (evaporating wok): the wok temperature should range from 60 ℃to 70 ℃. Two woks of leaves processed in Qinggu step are put into one wok. Adopting hand movements including grasping, shaking, joining, raising, pushing, clasping, flinging, grinding and pressing to make the tea leaves flat and straight, smooth, taper and completely dry. The process lasts 15 mins to 20 mins. The temperature should be low at first and then become gradually higher, and it should be slightly increased 3 mins before the removal of the leaves from the wok. The pressure applied in this step should follow the “light-heavy-light” rule, in coordination with the wok temperature.

5-Link of product characteristics to the geographical area

1. Soil conditions

The soil in tea gardens mostly is red soil, yellow soil and their variants, mainly composed of red loam soil, quaternary red clay, red clay and paddy soil and mother materials mainly including granite, tuff and rhyolite. The pH value of the soil ranges between 4.3 and 6.5. The soil is very suitable for the growth of tea trees.

2. Climatic conditions

The growing regions of Longjing Cha are located in an area covers between 28.83°～30.57°north latitude and 118.34°～121.26°east longitude. They are mainly distributed in the drainage basins of the Qiantang River and Cao’e River, with many mountains, hills, rivers and lakes. In this area locates West Lake and Qiandao Lake, and stands Tianmu Mountain and Kuaiji Mountain. This region has a typical subtropical monsoon climate with four distinctive seasons and a mild climate. It has a plentiful heat resources, sufficient rainfall and humid air. The annual average sunshine time ranges from 1,700 to 2,100 hours. The annual average temperature ranges from 15 ℃ to 17 ℃ (this is the annual average value by county (city, district) within the area of place of origin; hereinafter inclusive). The accumulated temperature of daily averages above 10 ℃ here range from 4500 ℃ to 5000 ℃, with a frost-free period of 210 d ～ 260 d. The annual average precipitation is 1,330 mm ～ 1,570 mm, with the rainfall distribution decreasing gradually from the southwest to the northeast; and the annual average air relative humidity is 75% ～ 82%. The area is covered by evergreen and deciduous broadleaved mixed forests, mainly composed with evergreen

broadleaved trees or deciduous trees, as well as cultivated Masson pines and bamboo forests. The above climate is beneficial to the accumulation of taste compounds in Longjing Cha such as polyphenol.

3. Elements in the manual dimension

Picking, Slight withering, QingGuo, Cooling, Moisturing and HuiGuo are essential elements in the processing of Longjing Cha.

There are three major principles in the picking of Longjing Cha: early, tender and diligent. Longjing Cha is also well-known for its tender buds. Frequent rounds of picking is another characteristic of Longjing Cha. The hand movements in roasting include shaking, pushing, flinging, pressing in one direction, rubbing, knocking, scratching, pressing and grinding, namely the “ten roasting tecniques”. In the meantime, mechanical frying is also adopted.

4. Historical origin

Longjing Cha acquires its name from its place of origin, which is originated from “Old Longjing Temple”. Many ancient poets and painters had written many well-known poems with Longjing Cha as theme inspired by the Longjing landscape and Longjing Cha. Originated from the Song dynasty, the name of Longjing Cha was recognized in the Yuan dynasty, renowned in the Ming dynasty, and thrived in the Qing dynasty, lasting nearly one thousand years. The long historical and cultural standing together make the Longjing Cha a “national treasure” with both a high economic and cultural values. At the foot of Lion Peak Mountain, there is the place where Master Biancai, a famous monk in the Northern Song Dynasty cloistered and drank tea and composed poems with eminent writers such as Su Dongpo in the Shousheng Temple, and also the place where Longjing Cha grows. The famous poet Su Dongpo highly praised Longjing Cha with his verse as “the tea buds with two leaves are newly picked at the foot of Baiyu Peak, with a bright green color and long lasting fresh taste in early spring”. He also wrote steles as “Old Longjing”, which were preserved in the Master Hu’s Hall of Shousheng Temple and the characters were engraved in the cliffs at the food of Lion Peak Mountain (*Shifeng Shan*) in the garden with 18 imperial tea trees. In Southern Song Dynasty, Hangzhou became the capital city, which further promoted the production of tea. Tea processed in the areas around Longjing were sold in the market in the Yuan Dynasty. Yu Bosheng, who loved drinking tea composed a poem “Visit to Longjing ” on drinking tea. It says: I was wandering in the Longjing District, the scenery here was so peaceful and beautiful, just like a drawing. Master Cheng welcomes the guests and have tea prepared. Although I sit in the house, I can smell the aroma. The tea liquor is pure and bright with green shadows of tea leaves. The tea buds are as precious as gold and should be picked before Guyu. Several friends who come with me even do not want to swallow the liquor.” It proves that the monks and literates at that time always came in companion to drink tea and enjoy the sceneries because of the peaceful scenes near Longjing and good spring water with good tea.

It was not until the Ming Dynasty that Longjing Cha gained its great reputation out of

the temples and made its way into the worldly households. In *Zhejiang Plate Inscriptions* that was written during the reign of Emperor Jiajing of the Ming Dynasty, records were found as “ Among all the teas produced in *Hangjun* (Hangzhou and adjacent areas) , no one is a good match to Longjing Cha, especially those tender buds harvested before Guyu, each and every piece of them are inevitably noble and prestigious because of the rareness”. The *Hangzhou Government Annals,* written in the rein of Emperor Wanli of the Ming Dynasty stated that, “the place of *Lao Longjing* (Old Dragon Well) is renowned for its tea, making it a rare produce in the two mountains.” The *Qiantang County Annals,* written in the rein of Emperor Wanli of the Ming Dynasty recorded that, “the tea produced in the place of dragon wells has a fragrance of Tofu pudding; the tea is clean in color and sweet after in flavor, a real *dissident* from varieties produced in other places”.

6- Inspection Body

Bureau of Quality and Technical Supervision of Zhejiang Province

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7-Labelling

The name of “Longjing Cha” should be indicated on the sales package of the product, as well as the name of the growing regions（Xihu, Qiantang or Yuezhou）. The tea leaves picked and processed in Xihu (Scenic Spots and Historic Sites of Xihu) District could be labeled “Xihu Longjing Cha”.

8-Local Legislative Requirements