

Turkish Tea: The Only Tea Washed with Snow that Snow Falls on**M.Yusuf Celik¹, Fatma Celik²**

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Abstract

Turkey is one of the most significant and unique countries in the world from the point of view of tea plant *Camellia sinensis*. There are no agricultural pesticides in Turkish tea, as tea growers do not use pesticides. Turkish tea is natural and healthy. There are no additives or chemicals in Turkish tea. No additives or chemicals are used in either tea gardens or in the production process. Turkish tea does not contain much caffeine. It is based on research carried out is known as the healthiest tea in the world. In addition due to climate, the tea produced in Turkey are naturally washed the falling snow. Because of the climate there is not harmful insects, therefore not contain pesticides or chemical amounts. Turkish tea is all natural.

CAY-KUR (General Directorate of Tea Enterprises), is the biggest and leading establishment of Turkish tea sector with its 47 wet tea processing factories, one tea packing factory, two regional directorates of marketing and production, 7 regional directorate of marketing, Base Repair Shop, Atatürk Directorate of Tea and Garden Cultures Research Institute with its 16.500 employees and wet tea processing capacity of 6.600 tons/day. 55-60% of wet tea products produced in the region which vary by years are purchased by Çaykur.

Tea contains more than 4000 chemical compounds that may affect the human body in many aspects. It is generally believed that polyphenols such as theaflavins and thearubigins as well as catechins as major constituents of tea are mainly responsible for antioxidant actions. Studies showed that tea possessed diverse pharmacological properties, which include anti-oxidative, anti-inflammatory, anti-mutagenic, anticarcinogenic, anti-angiogenic, apoptotic, anti-obesity, hypocholesterolemic, anti-arteriosclerotic, anti-diabetic, anti-bacterial, anti-viral, anti-aging effects.

Tea gardens in Turkey were established from seeds. Cultural precautions such as maintenance, pruning, fertilization and harvesting are carried out in conformity with scientific techniques in order to obtain a fresh tea product conforming to the production of top quality dried tea.

Key words: Turkish tea, ÇAY-KUR, Pesticides, Aflatoxin, Pesticides

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Introduction

The beverage tea, derived from the top leaves of the plant *Camellia sinensis* is one of the most widely used beverages in the world, second only to water. The three main categories of tea- green, black and oolong- are the result of different processing procedures. Green tea and black tea have similar protective effects in most of the tests run. In recent years, tea has attracted more attention because of reported health benefits. Tea contains more than 4000 chemical compounds that may affect the human body in many aspects. It is generally believed that polyphenols such as theaflavins and thearubigins as well as catechins as major constituents of tea are mainly responsible for antioxidant actions. Studies showed that tea possessed diverse pharmacological properties, which include anti-oxidative, anti-inflammatory, anti-mutagenic, anticarcinogenic, anti-angiogenic, apoptotic, anti-obesity, hypocholesterolemic, anti-arteriosclerotic, anti-diabetic, anti-bacterial, anti-viral, anti-aging effects (1).

According to the report of FAO; the world's tea production in 2009 was around 3,883,842 MT. China is the world's largest producer of tea, contributing 35.4% to the total global production, followed by India (20.6%), Kenya (8.1%), Sri Lanka (7.5%), Turkey (5.1%), Vietnam (4.8%), and Indonesia (4.1%). Other countries contribute 14.4% to the total global production. Turkey is the fifth largest producer of tea, with the production of 198,601 MT (2).

According to the report of "Food Turkey, International Food and Food Technology Portal" (3): Scientific studies have shown that tea has many positive effects on the human body. In these tests, tea preparations have repeatedly been

found to reduce tumor formation for cancers of the skin, lung, oral cavity, esophagus, stomach, small intestine, colon, liver, pancreas, and prostate. The antioxidant activity of tea is often reported as the mechanism behind these results. Consumption of tea is generally associated with a lower risk of heart disease and may reduce the risk of heart attack and stroke. It has been speculated that the antioxidant activity of flavonoids may be at least partly responsible as the mechanism for this protection. Antioxidants may also help to decrease the risk of atherosclerosis by preventing lipid oxidation in the blood, making the lipids less likely to stick to artery walls. Tea consumption also appears to improve the function of the lining of the blood vessels. This means that arteries have a better capacity for expansion and contraction as needed, and will be less prone to developing the plaques and lesions associated with heart disease. Tea also has importance with respect to dental health. Dental cavities are caused by a combination oral bacteria, sugars, and acids. Tea consumption can help to reduce cavities through several mechanisms: I) The tea plant naturally contains fluoride in its leaves which makes tooth enamel stronger and more resistant to acids. II) Tea helps to prevent bacteria from sticking to the tooth surface. III) Tea helps to decrease the acid production of oral bacteria. IV) Tea decreases the activity of the oral enzyme amylase, which is responsible for breaking down starch into sugar in the mouth. Since it contains major elements and vitamins, tea is also good for patients suffering from hypertension. It is generally agreed that, for most people, moderate caffeine consumption is harmless. Many people find that caffeine boosts mental clarity and alertness in a

pleasing way. Tea production in Turkey was initiated in the early years of the Republic and carried out in a microclimate along the Eastern Coast of the Black Sea Region. In Turkey, the possibility of tea cultivation was determined in 97 around Rize province and cultivation was first started by a law in 1924. In the same year the Tea Research Institute was established. Afterwards, research studies began to be conducted and tea cultivation began on a commercial base. In 1947, the first plant for processing green tea leaves was opened in Rize. In order to supply better service parallel to growth in this sector, an economic enterprise, CAY-KUR (General Directorate of Tea Enterprises) was established in 1971 and was fully authorized as a state monopoly in the tea business. In 1984, with the abolishment of the monopoly in the tea sector, private enterprises were also given the rights of procurement, processing and marketing (3).

CAY-KUR (General Directorate of Tea Enterprises)

Çaykur is the biggest and leading establishment of Turkish tea sector with its 47 wet tea processing factories, one tea packing factory, two regional directorates of marketing and production, 7 regional directorate of marketing, Base Repair Shop, Atatürk Directorate of Tea and Garden Cultures Research Institute with its 16.500 employees and wet tea processing capacity of 6.600 tons/day. 55-60% of wet tea products produced in the region which vary by years are purchased by Çaykur. Çaykur's market share in domestic dry tea market is approximately 60-65%. Çaykur being a state-owned enterprise which is domiciled in Rize has been established in order to develop tea agriculture of Turkey in conformity with the Agricultural Policy, to improve tea quality, to execute its

processing according to technical principles, to produce dry tea to meet domestic and foreign market needs, to import and export it, to create investment resources by helping capital accumulation through management policy which is based on efficiency principles. Çaykur's business line consists of purchasing tea leaves from manufacturers at the quality appropriate for the enterprise, having technological activities to process and make use of it, ensuring blending, packing and marketing of dry teas produced or imported in conformity with needs of domestic and foreign markets. Çaykur carries on its activities to establish plants necessary for this purpose and to process tea leaves, to make use of by-products arising from production activities and to manufacture auxiliary products, to carry out necessary researches in order to develop tea products' quality, efficiency and processing technique, to establish and operate institutions and laboratories, to deal with trade, to export and import, to carry out operations which are necessary for tea manufacturers to become a cooperative, to lead participation of tea industrialists in Tea Exchange, to take necessary measures for training of tea experts, to make nationalization, to ensure application of skilling programs organized under employment development works, to guide private small and medium scaled enterprises in administrative and technical fields and to fulfill other duties assigned under the legislation (4).

Sugar carries a huge risk in tea consumption. Drinking more cups of tea a day, taken amount of sugar would be high. According to the report of AHA (The American Heart Association) (5); Getting too much added sugar in your diet could significantly increase your risk of dying from cardiovascular disease, according to a study published in January 2014.

According to the study published in JAMA: Internal Medicine, those who got 17 to 21 percent of calories from added sugar had a 38 percent high risk of dying from cardiovascular disease compared to those who consumed 8 percent of their calories from added sugar. The risk was more than double for those who consumed 21 percent or more of their calories from added sugar. [Added sugars](#) are sugars and syrups that are added to foods or beverages when they're processed or prepared. AHA Recommendation; The American Heart Association recommends (5):

- No more than 6 teaspoons or 100 calories a day of sugar for women.
- No more than 9 teaspoons or 150 calories a day for men.

According to Sutluoglu I (6); Director general and chairman of the board at Çaykur, "Stevia may be a new income source for Turkey's north". Turkey's ÇAYKUR (General Directorate of Tea Enterprises) harvested stevia for the first time as part of zero-calorie sugar production project. General Manager of ÇAYKUR, Sutluoglu I; stevia that has been produced for trial basis at the garden of Tea and Horticultural Research Institute. After harvesting the stevia, Stevia is native to South America. "According to the studies that we made, stevia has 10-15 times the sweetness of sugar. After processing, its liquid form is 300-350 times sweetness than sugar. It is a non-sugar sweetener, which does not have the negative effects of sugar and it is zero-calorie and zero-protein. Chemical sweeteners might have a lot of side effect. Stevia is a plant that can be used widely without any negativity."

Turkish tea has important characteristics that differentiate it from other teas. Some very important features for the health of Turkish tea are listed below.

Turkish Tea Consumption

Turkey situated at west ends of Asia and east ends of Europe, and only country in Europe tea grows. Turkish people start to drink coffee from 15th century, and Tea drinking habits started from 17th century. When we look back her history of tea drinking, word "Cay" took important role, which took very long voyage from China, Mongolia, Central Asian countries to Russia, Georgia, Turkey through oldest road "Silk Road" and their drinking habits is quite similar in those countries. Tea plantation started in 1838, which they brought tea seeds from Japan but due to technological, geographical conditions they could not be successful. During this period one of Japanese Tea master visited Turkey and served Japanese Tea to Sultan And this gave influence to coffee drinking people to change to tea drinking. Today, Turkish became heavy tea drinker, and tea is one main export item to Middle East, and Russian countries. Word "Cay" cannot neglect in the Turkish daily life (7).

Tea gardens in Turkey were established from seeds. Cultural precautions such as maintenance, pruning, fertilization and harvesting are carried out in conformity with scientific techniques in order to obtain a fresh tea product conforming to the production of top quality dried tea. Today, tea is one of the national drinks of the Turkish people along with ayran, sahlep, boza and Turkish coffee. Turkish people drink a great deal of tea all day long especially at breakfast and in the evening. Turkish people are famous for their hospitality and it is very common to serve tea to guests in Turkey. More than 200.000 tons of black tea is consumed in Turkey every year. As a result of

establishing fertile, quality plantations; the application of modern, appropriate cultivation methods on the plantations by growers and the improvements achieved in the manufacturing industry, Turkish tea is produced in compliance with international standards. TS 4600 Turkish Black Tea Standard, which is almost in conformity with the ISO 3720, is applied in the production and marketing of black tea in Turkey. For black tea exports, ISO 3720 is applied (8).

According to the report of Çaykur, in recent years, exports of tea bags are gaining popularity. The main destinations of Turkish tea are the countries of European Union, Commonwealth of independent states (CIS- former Soviet states), India and the USA. Among the EU countries, Germany and the Netherlands; while among the CIS Countries, Uzbekistan and Kyrgyzstan are the most important markets. A total of 5104 MT of tea was exported from Turkey during 2002 (9). Today, Turkey holds a significant

place among the world's largest tea producers and ranks sixth in world production of tea (FAO, 2003) such that the farmers have no reservations about tea cultivation (10,11).

There are no Agricultural Pesticides in Turkish Tea:

As tea growers do not use pesticides, Turkish tea is natural and healthy (8)

According to General Manager of ÇAYKUR, Sutluoglu I; Turkish Tea is the only tea washed with snow that snow falls on. Because our climate tea produced in our country, is the most natural tea through the world. Turkey is the only country in the world that snows on tea. However, these important elements not adequately described (12). Picture 1 shows the nature of the tea plant, Picture 2, Picture 3 and Figure 4 show the Turkish tea washed with snow that snowed falls on. These figures have been obtained from archive of ÇAYKUR established in Rize/Türkiye.



Picture 1. The nature of the tea plant products in Rize/Turkey (From archive of ÇAYKUR)



Picture 2. Tea leaves snowed on and completely covered with snow in Rize/Turkey (From archive of ÇAYKUR)



Picture 3. Tea plants snowed on and completely covered with snow in Rize/Turkey (From archive of ÇAYKUR)



Picture 4. Tea plants snowed on and completely covered with snow in Rize/Turkey (From archive of ÇAYKUR)

Pesticides used to control weeds, insects, and other pests on farms and in urban areas can be harmful to humans. The frequency of pesticide contamination, however, is greater than expected. At least one pesticide was found in almost every water collected from streams and in about one-half of all wells sampled. Moreover, individual pesticides seldom were found alone—almost every water from streams and about one-half of samples from wells with a detected pesticide contained two or more pesticides. The composition of the most common pesticide mixtures differs between urban and agricultural areas and between agricultural areas with different crops and pests. In urban areas, simazine and prometon were the most common pesticides found together, whereas atrazine, DEA (deethylatrazine), and metolachlor were the most common compounds found in mixtures from agricultural areas. Mixtures containing both herbicides and insecticides were a common occurrence in urban streams.

More than 10 percent of urban stream samples contained a mixture of at least 4 herbicides plus the insecticides diazinon and chlorpyrifos (13). Some of the pesticides that pose reduced risks to human health and the environment are more expensive than conventional chemical pesticides. In addition, because reduced-risk pesticides generally are pest-specific, more than one of them may be necessary to replace any one conventional broad-spectrum pesticide. Many IPM (Integrated Pest Management) stakeholders we interviewed from USDA (United States Department of Agriculture), EPA (Environmental Protection Agency), the land-grant universities, and the private sector told us that the higher cost of reduced-risk pesticides is a major impediment to IPM adoption (14).

The ancient Chinese tradition of drinking tea dates back thousands of years to the early Chinese dynasties and aristocrats who drank the beverage for its medicinal properties. In ancient times,

leaves from the *Camellia Sinensis* (the tea plant) were either ground into a powder or placed as loose leaves directly into water to infuse it with herbal essence. Unfortunately, modern day tea is nothing like the unadulterated version of old tea. Many of today's tea brands are operating under the guise of providing health benefits and promoting clean living, but are actually laden with pesticides, toxins, artificial ingredients, added flavors and GMOs. Most tea is not washed that means if the tea was sprayed with cancer-causing pesticides, those pesticides go directly into the drinking cup. And this is the reason why tea is on organic shopping priority list. To prove this point, here are some shocking facts about one of the most well-known tea brands – Celestial Seasonings. A recent third-party analysis by Glaucus Research found that 91 percent of Celestial Seasonings tea tested had pesticide residues exceeding the U.S. limits. For example, Sleepytime Kids Goodnight Grape Herbal contained 0.26 ppm of propachlor, which is a known carcinogen under California's Proposition 65. The "Wellness" tea line was found to contain traces of propargite, also a known carcinogen and developmental toxin. The FDA has already issued two warning letters to Celestial Seasonings in regard to poor quality control. Imagine what happens when pesticide-laden tea is steeped in boiling water. If grocery store brands don't provide a clean option for you, perhaps a high-end loose leaf tea would circumvent some of the issues of grocery store brands. Teavana, which is found in malls across North America. Teavana taps into tea culture with the "Teavana Experience." Teavana tea was tested by an independent lab and 100 percent of it was found to contain pesticides. One tea in particular, Monkey Picked Oolong, contained 23 pesticides. 77

percent of the teas would fail European Union pesticide import standards, and would be banned from import. 62 percent of the teas tested contained traces of endosulfan, a pesticide that has been banned by the U.S., China, the E.U., and 144 other countries because it has been linked to impaired fertility and could harm unborn babies. The Plaintiffs contend that Celestial's teas contain "pesticides, herbicides, insecticides, carcinogens, and/or developmental toxins (collectively, "Contaminants")" and Celestial "did not dispute – and has never disputed – that the tea Products contained Contaminants. Nor has (Celestial) challenged the results of the Eurofins Tests" and "has not claimed that Eurofins was biased or that the Eurofins Tests were not, in fact, accurate". Even if it is determined that Eurofins' research was not accurate – it's important to note that Celestial's tea that was tested is NOT organic and some of this tea is sourced from China. Greenpeace issued a report on the alarming amount of pesticides found on tea from China, followed up by a detailed report on Lipton brand tea from China – in which they recommend only purchasing certified organic tea to avoid these pesticides. Reference law

documents: Complaint; Plaintiff's Memo in Opposition to Motion to Dismiss. Eating and drinking healthy can help reduce people's risk for heart disease, high blood pressure, diabetes, osteoporosis, and several types of cancer, as well as help them maintain a healthy body weight. As described in the Dietary Guidelines for Americans, eating and drinking healthy means consuming a variety of nutritious foods and beverages. As part of a healthy balanced diet is drink black or green tea. Implement policies and practices that promote healthy and safe environments (e.g., improving indoor air quality; addressing mold problems; reducing

exposure to pesticides and lead; ensuring that drinking water sources are free from bacteria and other toxins; implementing and enforcing tobacco free policies) are necessary (15-18).

The *half-life* of tea in the human body takes 24 *hours period*. These metabolites affect the body on systemic level. It has been implicated in benefiting almost every organ system in the body. It is cardioprotective, neuroprotective, anti-obesity, anti-carcinogenic, anti-diabetic, anti-atherogenic, liver protective and beneficial for blood vessel health. These beneficial effects are seen in doses present both in tea itself (as a drink) as well as from a supplemental form (19).

Turkish White Tea

There are health claims for white tea, such as: (a) white tea is lower in caffeine than green tea, (b) white tea is much higher in antioxidants, esp. catechins than green tea and (c) white tea has a higher anti-mutagenicity action compared to green tea. From compositional data available it can be stated that the first two claims are completely nonsense. Currently there is a great marketing and public interest for white tea. As there is a high demand but low supply it has sometimes been suspected that more white tea is now sold than is grown! (20).

Picture 5 shows the nature of white tea plant from the garden of ÇAYKUR in Rize/Turkey.



Picture 5. The nature of white tea plant from the garden of ÇAYKUR in Rize/Turkey.

There are no Additives or Chemicals in Turkish Tea:

No additives or chemicals are used in either tea gardens or in the production process (8)

The term fermentation is often used incorrectly in tea processing. The more correct term should be oxidation, which means exposure to air while drying without any additives during the process (21).

The use of chemicals in the modern society is well known. With specific reference to plant protection products and veterinary medicines are pharmacologically active substances used to fight pests and animal diseases. The chemical reality is that you cannot lead a chemical free life, because everything is made of chemicals. Chemicals are substances and chemistry is the science of

substances – their structure, properties and the reactions that change them into other substances. Claims that products are “chemical free” are untrue. There are no alternatives to chemicals, just choices about which chemicals to use and how they are made. Food additives prolong the shelf life of foodstuffs; colours and flavourings make foods more attractive than usual. The safety and the hygiene of food products are assured by containers that are constituted of chemical substances such as plastics, metals, glass or paper. On the other hand, a number of chemicals are present in the environment as pollutants; these contaminants may be unintentionally present in raw materials used for the production and the distribution of foods. At the same time, chemicals may damage the human health, the animal or plant safety

and the environment. As a consequence, the detection of harmful- or questionable-chemicals in foods and feeds has to be considered a matter of public health. Modern regulatory patterns are based on the prevention and the management of risks: food laws in the European Union share the same ratio (22,23).

There are no additives or chemicals in Turkish tea. No additives or chemicals are used in either tea gardens or in the production process. General Manager of ÇAYKUR, Sutluoglu I; harmful chemicals and dyes in foreign and smuggled tea is also available. In Turkish tea has no additives. Turkish tea has top quality, delicious, natural, healthy (24).

Picture 6 shows the most quality tea produced by high-technology in the ÇAYKUR factory, Rize/Turkey.



Picture 6. The most quality tea produced in the ÇAYKUR factory by high-technology Rize/Turkey.

Turkish Tea does not Contain Much Caffeine (8)

Caffeine was first isolated from coffee in 1819. It is also found in tea; in cacao pods, and hence in cocoa and chocolate products; in kola nuts, used in the preparation of cola drinks; in the ilex plant, from whose leaves the popular South American beverage yerba mate is prepared; and in guarana seeds, an ingredient in some energy drinks. To date, the only negative side effect reported from drinking green tea is 'insomnia' due to the fact that it contains caffeine. However, green tea contains less caffeine than coffee: there are, 30–60 mg of caffeine in 6–8 ounces of tea, compared to over 100 mg in 8 ounces of coffee. Green tea contains vitamin K and may interfere with warfarin. However, that was based on one individual consuming a gallon of green tea daily while on the medication. Based on current literature, there does not appear to be any significant side effects or toxicity associated with regular green tea consumption. Patients sensitive to caffeine should use caffeine-free green tea or a caffeine-free extract (21,25,26). When a person regularly ingests caffeine, abruptly stopping caffeine intake may cause headaches, fatigue or drowsiness. A cup of strongly brewed coffee or tea has more caffeine than a weakly brewed cup (27).

The caffeine amount of Turkish tea is lower than the others kinds of tea product abroad. Turkish tea does not contain too much of caffeine (8).

According to the results of the new study with the topics of "Caffeine Content Investigation in the Turkish Black Teas" made by Derun EM et al. found interesting findings for Turkish tea. In the study caffeine contents of three types of Turkish teas (Black tea, green tea and Earl Grey tea) are determined by using extraction method. Earl Grey tea is kind of specific

tea. Earl Grey tea refers more to the bergamot oil that is used to flavor the tea than the tea base itself. Bergamot is used in Earl Grey tea, and is also often used in aroma therapy, and is considered an essential oil. Bergamot is a citrus fruit, the size of an orange but with an appearance more like a lemon; it is often called the bergamot orange. Bergamot essential oil stimulates the work of the brain, improves concentration and increases immunity. Green tea and black tea are the two most popular types of Turkish Teas. The leaves of green tea are dried and roasted but not fermented, whereas black tea leaves are additionally fermented. From the results of experiments, caffeine contents are found in black tea, green tea and earl grey tea as $3.57 \pm 0.43\%$, $3.11 \pm 0.02\%$, $4.29 \pm 0.27\%$, respectively (28). Sharma VK et al reported that caffeine accounts in tea changed from 3% to 6%. (29)

There are no Aflatoxin in Turkish Tea (30)

Aflatoxins are toxic secondary fungal metabolites that contaminate dietary staples in tropical regions; chronic high levels of exposure are common for many of the poorest populations. Observations in animals indicate that growth and/or food utilization are adversely affected by aflatoxins (30).

According to the results of Pourtehdal Z ve Mazaheri M, samples were collected randomly from Tehran markets. In this regard, 40 black tea samples including Iranian tea and imported tea samples were taken in July 2010. Each sample was mixed and then all samples were transferred to the Mycotoxins Lab in the Institute of Standard and Industrial Research of Iran in Karaj, where aflatoxins were analysed in all samples. Average recoveries for AFB1, AFB2, AFG1 and AFG2 in tea were in the range 75–110%.

According to AOAC and Codex guidelines, the recovery range should be 70–110% at a level of 10–100 µg/kg and 60–120% at a level of 1–10 µg/kg, so the obtained recoveries are acceptable. Among 40 samples analysed, 29 samples (72.5%) were not contaminated with AFB1 (<LOD), 2 samples (5%) were contaminated with AFB2, none were contaminated with AFG1 and 3 samples (7.5 %) were contaminated with AFG2. The mean of AFB1 in the 11 contaminated samples was 10.0 ng/g and the mean for Aftotal was 12.1 ng/g. Aftotal was detected in 11 samples (27.5%). The results revealed that 30 among 40 samples were contaminated with aflatoxins (27.5% of the total). Mean AFB1 content was 10.0 ng/g and mean of aflatoxin total was 12.07 ng/g for the 11 contaminated samples (32).

In the study of MJ Mohammed (33); twenty- two black tea samples from different commonly used in Iraq has collected from retail stores selling. These examples was performed using the forward eliza in Tikrit University, Faculty of Agriculture, Department of Food Science laboratory. Aflatoxin B1 (mg/kg) found in the brands was as follows:

Al-Sanabul 7.32, Balabel 10.34, Apple 11.98, Gold leaf 9.5, Rabeea tea 4.54, Bent AL-Azhar 8.58, AL-Qeethara 10.5, Merd 10.86, Aflatoxins are found at high concentrations in the brands was as follows respectively. **Apple (11.98), and Merd (10.86) µg/kg.**

Wongwiwat T. et al (34), reported that aflatoxin amount was found as if 1.7 to 14.3 ng/g in 28 tea samples in Thailand.

In the topics of “Pesticide traces in some tea exceed allowable limits”; CBC

tested black and green teas including Canada’s most popular brands: **Lipton, Red Rose, Tetley and Twinings. Other popular brands tested included No Name, Uncle Lee’s Legends of China, King Cole and Signal.** Full test results have been published. Using an accredited lab, CBC used the testing method employed by the Canadian Food Inspection Agency (CFIA) to test pesticide residues in dry tea leaves. Half of the teas tested contained pesticide residues above the allowable limits in Canada. And eight of the 10 brands tested contained multiple chemicals, with one brand containing residues of 22 different pesticides. Some of the pesticides found — including endosulfan and monocrotophos — are in the process of being banned from use in some countries because of dangers to the environment and to workers (35).

Turkish tea has been stored absolutely clean, dry location so it has not contain aflatoxin. Picture 7 shows Turkish dry black tea produced and stored by ÇAYKUR. In conclusions tea must be free from GMOs, pesticides, and artificial garbage. Tea includes pesticides, toxins, artificial ingredients, flavors and GMOs unfortunately gives harm to human health. Turkish tea is based on research carried out is known as the healthiest tea in the world. In addition due to climate, the tea produced in Turkey are naturally washed the falling snow. Because of the climate there is not harmful insects, therefore not contain pesticides or chemical amounts. It is all natural.



Picture 7. Turkish dry black tea produced and stored by ÇAYKUR.

This study was supported by ÇAYKUR.

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