

White tea could be better than green in fighting disease

Numerous studies of the properties of green tea have shown that the beverage can fight against a variety of diseases, but new research presented this week suggests that its cousin, white tea, may have even more powerful bug-busting properties.

Presenting their research at this week's meeting of the [American Society for Microbiology](#) in New Orleans, scientists from the Department of Biology at Pace University's Dyson College of Arts & Sciences suggested that white tea extract (WTE) – in this case, under the Stash and Templar brands, could help retard the growth of a number of bacteria.

"Past studies have shown that green tea stimulates the immune system to fight disease," said Milton Schiffenbauer, primary author of the research. "Our research shows White Tea Extract can actually destroy in vitro the organisms that cause disease. Study after study with tea extract proves that it has many healing properties. This is not an old wives tale, it's a fact."

Dr Schiffenbauer said that WTE could have preventative applications in retarding growth of bacteria that cause Staphylococcus infections, pneumonia and dental caries.

White tea was more effective than green tea at inactivating bacterial viruses, he said. For example, the addition of WTE to various toothpastes, including Aim, Aquafresh, Colgate, Crest and Orajel, enhanced the anti-microbial effect of these oral agents.

Studies have also indicated that WTE has an anti-fungal effect on *Penicillium chrysogenum* and *Saccharomyces cerevisiae*, the researchers said. In the presence of WTE, *Penicillium* spores and *Saccharomyces cerevisiae* yeast cells were totally inactivated

[Nutraingredients](#)

26/05/2004 –

White Tea Beats Green Tea In Fighting Germs

Source: [American Society For Microbiology](#)

NEW ORLEANS May 25, 2004 -- New studies conducted at Pace University have indicated that White Tea Extract (WTE) may have prophylactic applications in retarding growth of bacteria that cause Staphylococcus infections, Streptococcus infections, pneumonia and dental caries. Researchers present their findings today at the 104th General Meeting of the American Society for Microbiology.

"Past studies have shown that green tea stimulates the immune system to fight disease," says Milton Schiffenbauer, Ph.D., a microbiologist and professor in the Department of Biology at Pace University's Dyson College of Arts & Sciences and primary author of the research. "Our research shows White Tea Extract can actually destroy in vitro the organisms that cause disease. Study after study with tea extract proves that it has many healing properties. This is not an old wives tale, it's a fact."

White tea was more effective than green tea at inactivating bacterial viruses. Results obtained with the bacterial virus, a model system; suggest that WTE may have an anti-viral effect on human pathogenic viruses. The addition of White Tea Extract to various toothpastes enhanced the anti-microbial effect of these oral agents.

Studies have also indicated that WTE has an anti-fungal effect on *Penicillium chrysogenum* and *Saccharomyces cerevisiae*. In the presence of WTE, *Penicillium* spores and *Saccharomyces cerevisiae*

yeast cells were totally inactivated. It is suggested that WTE may have an anti-fungal effect on pathogenic fungi.

Several findings in the new study are of particular interest:

* The anti-viral and anti-bacterial effect of white tea (Stash and Templar brands) is greater than that of green tea.

* The anti-viral and anti-bacterial effect of several toothpastes including Aim, Aquafresh, Colgate, Crest and Orajel was enhanced by the addition of white tea extract.

* White tea extract exhibited an anti-fungal effect on both *Penicillium chrysogenum* and *Saccharomyces cerevisiae*.

* White tea extract may have application in the inactivation of pathogenic human microbes, i.e., bacteria, viruses, and fungi.

[Science Daily](#)

White Tea, [Sean Paajanen](#)

I'm sure you've heard of black and green tea, but white?

Black tea has been fully fermented during processing, and green has not been fermented at all. Oolong teas are somewhere in the middle. So what is 'white tea'?

Well, just like those other teas, white tea come from the *Camellia sinensis* plant. But the leaves are picked and harvested before the leaves open fully, when the buds are still covered by fine white hair. Hence the name. White tea is scarcer than the other traditional teas, and quite a bit more expensive.

White tea is similar to green tea, in that it's undergone very little processing and no fermentation. But there is a noticeable difference in taste. Most green teas have a distinctive 'grassy' taste to them, but white tea does not. The flavour is described as light, and sweet. You should steep white tea in water that is below the boiling point. The [UtiliTEA Variable Temperature Tea Kettle](#) is perfect for use with white tea.

If you are drinking tea for your health, you may want to consider white teas. There is also considerably less caffeine in white tea than the other varieties (15mg per serving, compared to 40mg for black tea, and 20mg for green). Some [studies](#) have also shown that white tea contains more active cancer-fighting antioxidants than green tea.

As with all teas, there are many varieties of white tea, with poetic names such as: white peony, golden moon, silver needle and white cloud. White teas are produced mostly in China and Japan, but the Darjeeling region of India also produces some fine white teas.

White Tea, Rarer, Healthier

April 13 2000. White tea, known mostly to tea connoisseurs, may have the strongest potential of all teas for fighting cancer, according to Oregon State University researchers. They presented the first research ever on white tea March 29th at a national meeting of the American Chemical Society.

Among the rarest and most expensive varieties of tea, white tea is produced almost exclusively in China. It belongs to the same species (*Camellia sinensis*) as other tea plants, but has a higher proportion of buds to leaves. The buds are covered by silvery hairs, giving the plant a whitish appearance.

Some teas are processed more than others. White tea is rapidly steamed and dried, leaving the leaves "fresh." Green tea, composed of mainly leaves, is steamed or fired prior to being rolled. Oolong and black teas get their dark color and flavor from additional processing. The researchers think that processing may play a part in tea's cancer-fighting potential. The key is a class of chemicals called polyphenols. "Many of the more potent tea polyphenols ('catechins') become oxidized or destroyed as green tea is further processed into oolong and black teas," says Roderick H. Dashwood, Ph.D., a biochemist in the university's Linus Pauling Institute and principal investigator of the study. "Our theory was that white tea might have equivalent or higher levels of these polyphenols than green tea, and thus be more beneficial."

Chemical analysis confirmed their theory. White tea contains the same types of polyphenols as green tea, but in different proportions. Those present in greater amounts may be responsible for white tea's enhanced cancer-fighting potential, says Dashwood. Lab tests on four varieties of white tea showed that it may prevent prevent DNA mutations, the earliest steps leading to cancer. The researchers say that their latest data indicate that white tea may protect against colon cancer in particular.

The researchers say more studies are needed to determine whether white tea actually protects people against cancer. "White tea, and tea in general, is a healthy alternative to other popular drinks, such as sodas," says Dashwood. "But to be on the safe side, one should maintain a healthy lifestyle that includes a diet rich in fruits and vegetables, regular exercise, and avoidance of smoking."

Dr. Dashwood is Associate Professor in the Department of Environmental and Molecular Toxicology at Oregon State University. He also is Principal Investigator with the university's Linus Pauling Institute. Dr. Santana-Rios is a post-doctoral Research Associate with the Linus Pauling Institute.

Dr. Santana-Rios presented his paper on white tea March 29 at a meeting of the [American Chemical Society](#).

Source: [Psa- Rising](#)

White Tea: Culmination of Elegance

by Joshua Kaiser

[Tea Muse](#)

When Song Dynasty emperor Hui Zhong proclaimed white tea to be the culmination of all that is elegant, he set in motion the evolution of an enchanting variety. For centuries white tea has been shrouded in obscurity outside of China, but today its much-beloved qualities are being discovered by tea lovers around the world. Equally as stunning dry as it is steeped in water, white tea presents an exquisite range of flavor and aroma, from a delicate sweetness to a more pronounced brightness. Here's its interesting story.

A form of compressed tea referred to as white tea was being produced as far back as the Tang Dynasty (618-907 A.D.). At this time in tea's history, the nature of the beverage and style of tea preparation were quite different from the way we experience tea today. Tea leaves were processed into cakes and prepared by boiling pieces of the compressed tea in earthenware kettles. This special white tea of Tang was picked in early spring when the new growths of tea bushes that resemble silver needles were abundant. These "first flushes" were used as the raw material to make the compressed tea.



During the Song Dynasty (960-1279), production and preparation of all tea changed. The tea of Song included many loose-leaf styles (to preserve the delicate character favored by the court society), but a new powdered form of tea emerged. Tea leaves were picked and quickly steamed to preserve their color and fresh character. After steaming, the leaves were dried. The finished tea was then ground into fine powders that were whisked in wide bowls. The resulting beverage was highly regarded for its deep emerald or iridescent white appearance and its rejuvenating and healthy energy.

This Song style of tea preparation incorporated powdered tea and ceramic ware in a ceremonial aesthetic known as the Song tea ceremony. Japanese monks traveling to China at this time had learned the Song preparation and brought it home with them. Although it later became extinct in China, this Song style of tea evolved into the Japanese tea ceremony, which endures today.

Many forms of white tea were made in the Song Dynasty due to the discerning tastes of the court society. Hui Zhong, who ruled China from 1101-1125, referred to white tea as the best type of tea, and he has been credited with the development of many white teas in the Song Dynasty, including "Palace Jade Sprout" and "Silver Silk Water Sprout."

Producing white teas was extremely labor-intensive. First, tea was picked from selected varieties of cultivated bushes or wild tea trees in early spring. The tea was immediately steamed, and the buds were then selected and stripped of their outer, unopened leaf. Only the delicate interior of the bud was reserved to be rinsed with spring water and dried. This process produced white teas that were paper thin and small.

Once processed, the finished tea was distributed and often given as a tribute to the Song court in loose form. It was then ground to a fine, silvery-white powder that was whisked in the wide ceramic bowls used in the Song tea ceremony. These white powder teas were also used in the famous whisked tea competitions of that era.

After the transition from compressed tea to the powdered form, the production of tea for trade and distribution changed once again. In 1391, the Ming court issued a decree that only loose tea would be accepted as a "tribute." As a result, loose tea production increased and processing techniques advanced. Soon, most tea was distributed in full-leaf, loose form and steeped in earthenware vessels.



White Teas Today

Modern-day white teas can be traced to the Qing Dynasty in 1796. Back then, teas were processed and distributed as loose tea that was to be steeped, and they were produced from "chaicha," a mixed-variety tea bush. They differed from other China green teas in that the white tea process did not incorporate de-enzyming by steaming or pan-firing, and the leaves were shaped. The silver needle white teas that were produced from the "chaicha" tea bushes were thin, small and did not have much silvery-white hair.

It wasn't until 1885 that specific varieties of tea bushes were selected to make "Silver Needles" and other white teas. The large, fleshy buds of the "Big White," "Small White" and "Narcissus" tea bushes were selected to make white teas and are still used today as the raw material for the production of white tea. By 1891, the large, silvery-white down-covered Silver Needle was exported, and the production of White Peony started around 1922.

According to the different standards of picking and selecting, white teas can be classified as Yin Zhen Bai Hao (Silver Needle), Bai Mu Dan (White Peony), Gongmei (Tribute Eyebrow), and Shou Mei (Noble, Long Life Eyebrow). All of these white teas are widely produced in China and are available in America.

The highest-quality white teas are Silver Needle and White Peony, both of which have various grades and are primarily produced in the Fuding and Zhenhe districts of Fujian, China. Silver Needle is carefully hand selected from the tender fleshy sprouts of the "Big White" tea bush or the "Narcissus" bush. If the buds are selected with two leaves intact, then the resulting selection will be made into White Peony tea. The leaves and other material left over from the selection of Silver Needle and White Peony will be processed into Noble, Long Life Eyebrow. Gong Mei is made from "chaicha" bushes and is processed slightly differently than other white teas. Both Gong Mei and Shou Mei are considered lesser forms of white tea compared to Yin Zhen Bai Hao and Bai Mu Dan.



Evaluating Quality

"Three Whites" is the primary requirement of the fresh tea material. This means the buds, the first leaves and the second leaves must be covered with tiny white hairs. Be warned that a tea with an abundance of white tips or large buds is not necessarily a true white tea.



The quality of white tea is greatly dependent on the season of harvesting. The best white tea is picked in early spring and is subject to numerous requirements. First of all, picking top-grade white tea is prohibited on rainy days or when the early morning dew is not dry. It should never be picked when the buds appear purple; when they are damaged by wind, people, or insects; when they have begun to open; when they are hollow; when they are too long or too thin; when there is one bud with three to four leaves; and when there is frost on the ground.

The highest grade of the finished Silver Needle white tea should be fleshy, bright colored and covered with tiny white hairs. The shape should be very uniform, with no stems or leaves. The flavor and fragrance should be delicate, light, fresh, and slightly sweet. The liquor should be a glittering pale yellow color with evidence of floating white hairs that reflect light.

The highest grade of finished White Peony white tea should appear as two intact grayish green leaves and a silvery bud. The two leaves and bud should be covered with a fine, silvery-white down. The bud and two leaves should adhere to the stem and should be uniform and virtually unbroken. This grade is extremely rare in America. The finest quality should have a shimmering clear infusion with a delicate lingering fragrance and a fresh, mellow, sweet taste devoid of astringency and grassy flavors.

Most White Peony in America yields a darker infusion, a nutty or bamboo fragrance, and a sweet and slightly smoky taste. These teas are not very high grades in China, but their more obvious character is widely appreciated in America and Europe and is more suitable for foodservice because they are less delicate and have a more pronounced flavor and fragrance.

Modern Production



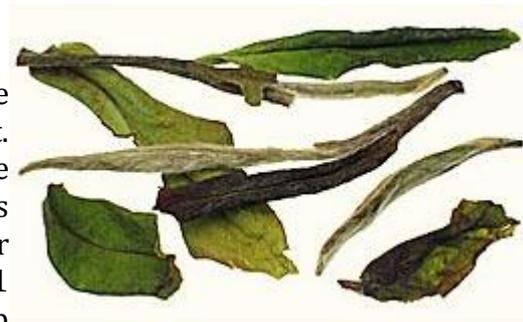
Due to tea's ancient history and its evolving processing techniques, there has been confusion about how white teas are produced today. Modern-day white teas are not steamed. Their process relies on withering, careful hand selection and bake drying. The special nature of white tea's color, leaf shape and hair fragrance is mainly created during the withering stage.

White tea production is greatly dependent on the weather conditions when the tea is made. Adjustments to the withering stage and the method of bake drying will be determined by tea makers as they interpret the effect the weather will have on the withering process. Temperature and humidity of the environment will dictate the techniques and timing of the withering and bake drying process. White tea that is withered in conditions that are too hot will become reddish, while leaves that are withered in conditions that are too cold will become blackish.

A tea maker's ability to balance solar and indoor withering of white tea is the major determining factor of quality. There are many nuances of white tea production that are dependent on the region and climate where the tea is made, but the major stages in the process are selective picking from specific varietals, withering, careful hand selection, and bake drying.

The Perfect Cup

White teas are best when prepared like green tea. Their delicate nature will be destroyed by water that is too hard or too hot. Filtered water or spring water that is not too heavy will produce the best cup. Water that is too hot will cook the delicate leaves and render an inferior-tasting, astringent cup. The ideal water temperature is between 175 and 180 degrees Fahrenheit. Add 1 to 1.5 tablespoons of white tea per eight ounces of water in a cup or teapot. Pour water over the tea and steep for two minutes.



One serving of white tea can be brewed several times, with each steep revealing another element of flavor. In the case of Silver Needle, the steeping can be as long as three to four minutes, depending on the water temperature. Some drinkers like to steep Silver Needle with cooler water for longer times. This will increase the stockiness of the tea infusion, but it will also yield a less fragrant and lingering cup of tea. Experiment with these methods to find your perfect cup of white tea.

White Teas From India

by Rajesh Agarwala
[Tea and Coffee](#)



White teas are traditionally a product of China's tea plantations. The most expensive and rare of that country's teas, the tender silvery-green buds are gathered in the spring in the very brief span of time between the new buds forming and just before they start to open. The leaves used for the most expensive, top quality white tea can be up to one inch long and are from two varieties of the Chinese tea bush-the Shui Hsien

and the Dai Bai.

Once plucked, the buds are steamed to kill off the enzymes that would otherwise cause the tea to deteriorate, and then dried-sometimes in the sun. The best of these delicate teas give a very pale yellow infusion and a gentle soft mellow flavor. Teas made from the smaller buds and attached leaves give a more orangey liquor that has a sweet, light taste.

POOBONG TEA ESTATE

Poobong Estate, established by the British in 1899, sits on one of Darjeeling's highest peaks, where it feels as if the sky is within the reach of your fingertips and at night the stars twinkle close to your head. The garden is located at Ghoom, which has the highest railway station in the world. The name is Tibetan

for “Valley behind the Clouds” and the estate is famous for its lush, green velvet valley where orchids grow wild among the tall pine trees. Because of the altitude, the garden is enshrouded in fog and mist almost all the time, and sometimes it is difficult to find your way through the dense cloud.

The tea grows at heights ranging from 2,500 to 4,500 ft, and most of the plantation is planted with Chinese tea bushes of superior quality. The garden covers 1,000 acres but only 500 of these are under tea. Annual production is 70,000 kg of tea.

The tea bushes at Poobong were originally brought from China to the British. Some of those first bushes are still growing on the estate, but they have become very old and give very little leaf. But the quality is still good, so we gather seeds and cuttings from those plants that give the best quality, and use them to nurture baby plants in the nursery. After 15 months, these new plants are set out in the field and then left to mature for six or seven years before any plucking is carried out. Poobong has, in the past, specialized in growing baby clonal plants to supply other Darjeeling gardens. One famous customer was Temi in Sikkim, an Indian tea estate up until 1969.



Pawan Agarwala, director of Poobong Tea Co. Ltd. (on the left) with two visitors to the garden.

POOBONG WHITE TEAS

After several years of research and development, Poobong Tea Estate is successfully producing oolong and white teas. The plants used have been developed from the Chinese variety of the tea bush using no chemicals-only cow dung manure. Special treatment ensures that the teas do not lose their subtle natural flavor during the manufacturing process.

To produce “white” teas at Poobong, two leaves and a bud are gathered just before sunrise so that they still have some moisture on their surface. In traditional tea making, each picker gathers between one and five kilograms in one day, but for the manufacture of white teas, they pluck only a quarter of a kilogram. So seven days of picking are needed to make eight kilos of white tea. We maintain a seven-day plucking round from March to the end of November.

Once the leaves have been gathered into the workers’ baskets, they are immediately transported to the factory where they undergo special treatment before being rolled. After rolling, they are put through the dryer and are then sorted into different grades.

The various grades include SFTGFOP-1 (Special Flowery Tippy Golden Orange Pekoe), STGBOP-1 (Special Tippy Golden Broken Orange Pekoe), TGOF (Tippy Golden Orange Fannings), and Dust. TGOF and Dust are used in teabags while the other grades are sold loose.

Darjeeling white teas are the very best of premium Darjeeling teas. The dried buds are a very pale silvery green and give a liquor that is very light green in color and soft in the mouth.

Darjeeling produces between 8 and 10 million kg of tea every year, almost all of which are exported to customers all over the world. There is very little Darjeeling tea for consumption by Indian people who instead tend to drink teas grown at lower elevations in Terai, Dooars and Assam.

Poobong depends entirely on the export market and sells to a wide range of tea shops, brokers, merchants, importers and private individuals around the world-mainly in the U.S., Germany, the U.K., Australia, Denmark, Canada, and Japan. Minimum quantities of one kilogram are sent with no extra transportation costs added and Poobong teas can be ordered by e-mail. We also organize individual or

group visits for anyone interested in the plantation and the manufacturing of our teas. Our head office in Calcutta can also arrange free tastings of Darjeeling teas.

LIFE FOR THE WORKERS

The garden is so high and remote that the local inhabitants and tea pickers have very little contact with the outside world. There are 500 permanent workers at Poobong, many of whom come from families who have been working on the estate for generations. Not all the employees are engaged in picking. They are also involved in weighing the freshly picked green leaves, the manufacturing process in the factory, spraying the bushes, maintenance of roads, security, postal delivery, and some work as staff in the bungalows and offices.

The female pickers wake up at 4am, and do all their housework before setting off for the day on the steep slopes of the tea garden. Life on the estate is very simple. The company provides all the pickers with a two-bedroom house with a kitchen, bathroom and kitchen garden where the families grow vegetables and cardamom. They grow enough vegetables to support themselves throughout the year, so they do not need to buy at the market. They also keep cows, pigs, sheep and chickens, which supply them with meat and dairy products. What they don't consume themselves, they sell for extra income. The company subsidizes the workers with rations of wheat and rice.

Poobong Tea Company also provides free medical treatment for all the workers and their families, runs a small dispensary with a doctor and a nurse, and pays for any hospital treatment required by the employees. Free schooling is provided for children up to the age of 14, and after that some of the students continue their education at schools or colleges in the nearby town.

Maternity benefits available for all female workers, who get paid leave, and there is a crèche for babies and small children where free milk and biscuits are provided. A club organizes sports and other social activities, and football and cricket matches are a regular occurrence between Poobong and neighboring gardens.

For more information about Poobong Tea Company Limited, to arrange visits to the garden or to organize tastings at the Calcutta office, please contact Rajesh Agarwala via e-mail: poobong@vsnl.com

[Tea & Coffee - December/January 2001](#)

Tea Consumption in U.K. Declines

U.K. - In the past two years, sales of traditional teabags in the U.K. have fallen by 16% and loose tea by 9%. The tea market, worth £707 million in 1999, fell to £623 million last year.

Tea's decline is blamed on competition from new products such as fruit teas and the growing range of cold drinks from mineral water and fruit juices to sodas, which means that young people are increasingly not getting into the tea-drinking habit.

Health concerns have also hit sales. In contrast, sales of caffeine-free herbal and fruit teas rose by up to 50%. Despite tea's popularity, a survey by the consumer research group Mintel shows that almost 80% of Britons still drink tea. In the over-65 age group that figure is 85%. Of those aged 15 to 24, just 72% drink tea.

Ellen Shiels, the senior market analyst at Mintel, said: "There is a need by manufacturers to make traditional tea more of a fashionable beverage. The tea market has become more segmented, trying to be many things to more people."

Shiels said that consumers regarded the new teas as healthier and more fashionable than the traditional cuppa. “Herbal and fruit teas are being sold as “well-being” teas. Green tea is being promoted as containing high levels of antioxidants, and white tea is said to contain three times the number of antioxidants as green tea.”

[Tea & Coffee - July/August, 2005](#)

White Tea Defined By Industry

By Barry Cooper

There is a form of *Camellia Sinensis* that reigns as one of the world’s greatest teas, and that is white tea. Recently, it has experienced a surge of interest and demand that has propelled the grade into the forefront of tea news. Yet, little is really known about this unique product.

What is white tea? Answer: It is the bud of the tea bush, then perhaps the bud and one leaf, or maybe the bud and two leaves, which will then depend on the season it was picked and the country of origin. Then again, not all tea producing countries can make white tea.

If all of this sounds confusing, let me add to that confusion by saying that what is true is that white tea was first harvested during the Song Dynasty (960-1279) in the Zhenghe, Jianyang, and Fuding counties of the Fujian province. It is also one of the rarest and most expensive teas in the world. However, if this is so, then why are there boxes on sale for fewer than five dollars? Well, if it’s too good to be true, then it probably isn’t all white tea in the box.

Then, what is the standard for white tea? There isn’t one, and that’s the problem. The Tea Association of the U.S. thought it would be a good idea to establish a definition to protect the integrity of one of the world’s great teas. They conducted a survey among their sister associations to help define the white tea segment. Responses came from around the globe with three organizations strongly in favor of a traditional definition, two leaning in that direction, one suggesting we stay out of the fray, and 11 favoring a new definition that ‘white tea’ should be a process, as opposed to an origin.

Here are the growing pains of a ‘category.’ Currently, there are 600-800 metric tons of white teas produced each year worldwide. The Fujian province can increase production to 3000 metric tons within two years, and of course, other countries can produce ‘white teas’ as well.

Everyone is looking at white teas’ potential, but no one likes the price or availability. Consistency and seasonality are also an issue. When buyers need small quantities of white tea, this is not a problem. Trouble begins when buyers notice the large market potential and start marketing blended white teas. This is easy to do, as the public does not understand the category.

This is then the inherent danger for white tea, since poor quality whites, and greens sold as whites, will damage the reputation and longevity of the category.

The board of the U.S. Tea Association concluded that as an industry we should agree as to what defines white tea, and stick to it. They felt that packers should be open about blended products, as well as specify the contents of a white tea “blend.” They also agreed that packers should be responsible for the claims made and be able to substantiate health and wellness claims, which may have not been corroborated.

The first step, according to the U.S. Tea Association, was to give white tea a definition. Despite being first produced in Fujian province, white tea refers to the production technique, not a statement of origin. It is produced from the fresh unfurled buds of the *Camellia sinensis* shrub and the processing involves

no withering, fermentation or rolling process. The resultant liquors should be clear to pale yellow in color.

Among the current countries producing “white tea” are China, India, Kenya, Sri Lanka and Vietnam. But caveat emptor -- or buyers beware --- be sure to satisfy yourself as to the method of production and be careful to understand the “real” potential availability. If the liquor is green, it is a green tea and more importantly, if it is cheap tea, it probably isn't white tea.

Finally, if in doubt, turn to the following proposed definition.

In Order for White Tea to Be Termed So, It Should Be:

Processed in accordance with the strict harvesting and processing guidelines, which were originally established in Fujian Province, China.

Lower grades (Pai Mu Dan, Kung Mei, Sow Mei) are made from larger and coarser leaves, but the process is the same and there should be some presence of the white buds.

There should be no withering, fermentation (oxidation) or rolling of the buds, though the process of air-drying by definition involves some withering and oxidative effects.

Silver Needle grade is made from finely plucked tender shoots (buds) of *Camellia Sinensis* usually, but not always, from the first flush after winter. These are air-dried or directly warmed/fired.

The liquor of White Tea is a very pale yellow color and mild tasting in the cup. Coarser and cut grades are of course less pale and delicate than the highest grades (Silver Needle).

Any tea producing country may make white tea, provided manufacturing conforms to the above harvesting and processing steps. The value of this tea depends on the proportion of buds included, the leaf appearance, as well as liquor quality and color (the paler and more buds included in the leaf, the better).

It is said, “Guidelines are for the wise men and the obedience of fools.” I guess I can add to that by saying, “Don't be fooled. Be guided.”

I would like to recognize Peter Goggi of Unilever Best Foods, John Snell of Van Rees, Jem McDowall UTTC and Joe Simrany of the US Tea Association for their time and energy in bringing this project home. It is a team effort and I was just the one asked to write the article. Thus, the blame for the content and comment is mine, other than the definition of course, for which everyone can claim credit.

About the Author: Barry W. Cooper recently celebrated his 40th year in the tea industry. He not only holds a number of tea patents, but also recently completed a book on tea and his early life in Africa, aptly titled, “Never Throw Rocks at a Baboon - Stories of a Colonial Tea Man.”
Tea & Coffee - April/May, 2006

TEA COMPLEMENTS DRUGS IN FIGHT AGAINST COLON CANCER

By David Stauth, 541-737-0787

SOURCES: Rod Dashwood, 541-737-5086

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CORVALLIS, Ore. - A new study has found that consumption of moderate amounts of green or white tea might provide a protection against colon tumors about as well as a prescription drug, sulindac, that has been shown to be effective for that purpose.

The research was just published in the journal *Carcinogenesis* by scientists from the Linus Pauling Institute at Oregon State University, in studies funded by the National Cancer Institute.

It may suggest some optional approaches to cancer prevention or therapy, especially for people who have trouble with the side effects that can be associated with regular use of non-steroidal anti-inflammatory drugs, or NSAIDs, such as sulindac or aspirin.

The study also indicated that routine consumption of green or white teas could be especially effective in combination with NSAIDs, and provide more cancer protection than either of the products separately.

"Tea is one of the most widely consumed beverages in the world, and recent upswings in the sales of green tea in the United States can be attributed to reports of potential health benefits against cancer and other chronic diseases," said Gayle Orner, an OSU research associate, in the report. "Teas exert significant protective effects in experimental animal models of skin, lung, esophageal, gastric, hepatic, small intestinal, pancreatic, colon, bladder and mammary cancer."

OSU's Linus Pauling Institute has been at the forefronts of efforts to examine the effectiveness of white versus green tea in blocking mutagens and preventing cancer. In the latest study, they examined green and white teas that have high levels of the protective polyphenols called catechins, and also compared these teas to sulindac. This drug is commonly used around the world for many purposes, including the prevention of certain colon cancers.

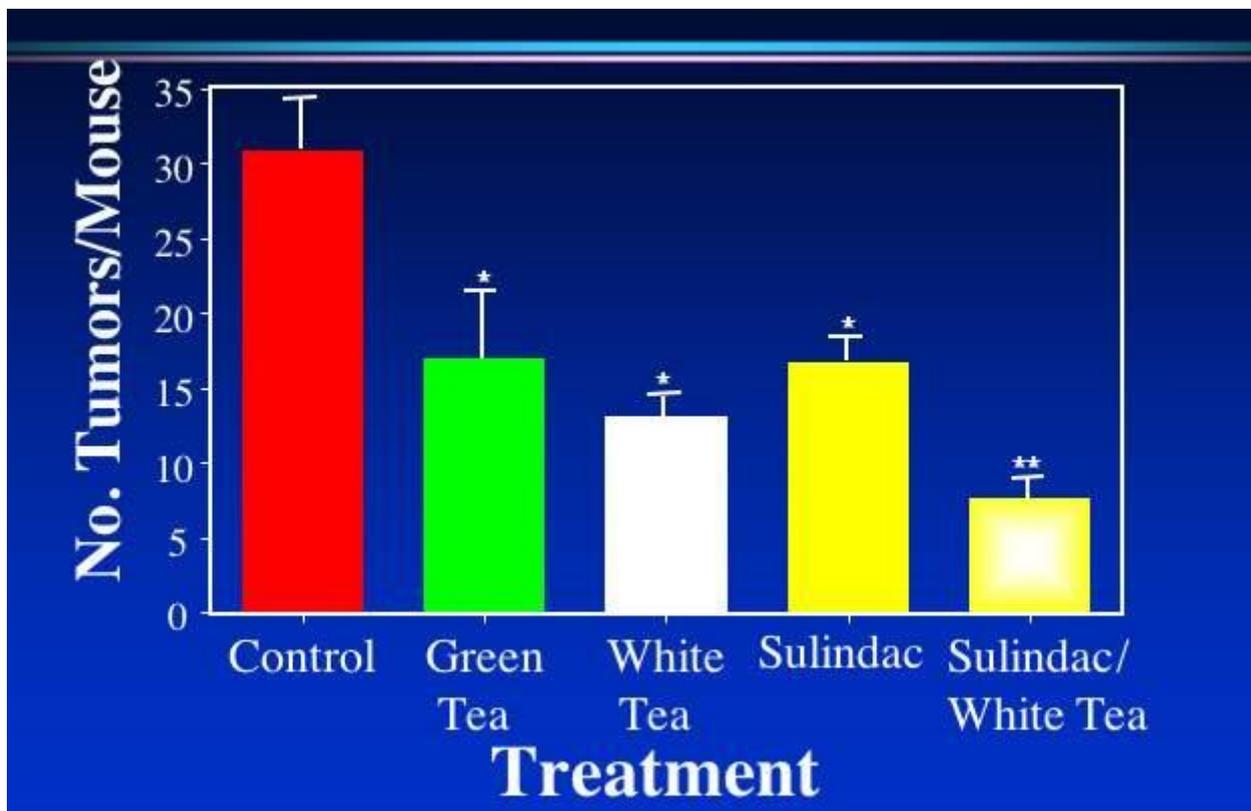
"We have evidence that consumption of tea at the same time as a person ingests mutagens can potentially block some of the effects of the mutagens through changes in metabolism," said Rod Dashwood, a professor in the Linus Pauling Institute. "But since everyone probably has some DNA damage in their cells, another question becomes, is there anything we can do to prevent cancer progression even after cells are damaged?"

To study this, the researchers used as a model a special group of laboratory mice that are genetically predisposed to tumor development, especially in their intestines.

A group of these mice that received no treatment each developed about 30 polyps in their colons. Other research has shown that a therapy with sulindac, the prescription NSAID, could cut polyp formation in these mice about in half.

But consumption of green tea, the scientists found, reduced the number of tumors in the mice from an average of 30 to 17; and consumption of white tea from an average of 30 to 13. Mice given both sulindac and white tea, in combination, saw a tumor reduction of about 80 percent, from 30 tumors to six.

"These are pretty exciting results," Orner said. "What's especially significant is that as far as we can tell consumption of tea has none of the side-effects of NSAIDs, which can be severe, including bleeding, ulcers and even death."



A new study from the Linus Pauling Institute at Oregon State University suggests that consumption of green and white tea can be just about as effective as use of the prescription drug sulindac in preventing colon tumors in a certain type of laboratory mouse that is genetically predisposed to cancer.

The control group of mice received no treatments, and developed an average of about 30 tumors each. The most effective results were obtained with a combination of tea and sulindac.

Use of NSAIDs for cancer prevention, heart disease and other concerns is increasingly common with many people, and high aspirin intake has been associated with a 40-50 percent decrease in colon cancer mortality, the researchers note in their report.

Although the complications from prolonged use of NSAIDs can be significant, they often are dose-dependent, the researchers noted in their report. Any cancer preventive agent that worked effectively in combination with NSAIDs and allowed use of lower dosages could be quite significant, the scientists said, and green or white tea consumption may fit that description exactly. Tea and its constituents also have been found to have many additional cancer-preventive mechanisms in their own right, the report said. These include antioxidant properties, induction of cell-cycle arrest, inhibition of oncogene expression, apoptosis induction, and other factors. In-vitro studies, they said, have suggested that tea plus sulindac may work in synergy to kill human lung cancer cells.

Consumption of black tea does not appear to have the same anti-cancer properties in some situations as green or white tea, the researchers said. White tea, the least processed of all teas, has the highest levels of polyphenols and antioxidants, and is available at specialty tea stores, over the Internet, and in some grocery stores.

Polyphenols can also be purchased as a dietary supplement, the scientists said, but even less is known about how they function in the body, compared to the consumption of food products.

The level of tea consumption in humans that might provide useful levels of polyphenols could be equated to drinking about three coffee-sized mugs a day, the scientists said. This is based on studies in Japan with green tea and gastric cancer, where researchers essentially concluded, "the more the better."

Colon cancer is one of the leading causes of cancer death worldwide, and continued advances in its prevention and therapy will require better understanding of these diet and drug interactions, Dashwood said. Ultimately, a diverse regimen of drugs, dietary factors, routine checkups, medical and surgical treatments may all play key roles in preventing death from this cancer, he said.

Beyaz çay, binbir derde deva

Çay İşletmeleri Genel Müdürlüğü'nün (ÇAYKUR), siyah ve yeşil çaydan sonra deneme üretimini yaptığı beyaz çayın, kanserden damar sertliğine kadar pek çok hastalığa iyi geldiği söyledi.

AA

Güncelleme: 15:45 TSI 18 Kasım 2005 Cuma

TRABZON - Çaykur Genel Müdürü Ekrem Yüce, Atatürk Çay Araştırma Enstitüsü'nde beyaz çay için Mayıs ayında başlattıkları deneme üretiminden olumlu sonuç aldıklarını belirtti.

Beyaz çayın, çayın en kıymetli yeri olan tepe tomurcuğundan üretildiğini, bu tomurcuğu toplamanın oldukça güç ve zaman aldığı ifade eden Yüce, "Bu nedenle fazla üretim imkanımız yok. Beyaz çaya, çayın anzer balı diyebiliriz. Sağlık yönünden çok faydalı, ancak ekonomik anlamda çok pahalı bir ürün" dedi.

Beyaz çayın kilosunun dünya piyasasında 50 ile 250 dolardan satıldığını dile getiren Yüce, genelde Avrupa ve ABD'de maddi durumu iyi olanların kullandığını çayın, buralarda eczanelerde de gram işi satıldığını kaydetti.

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Talep üzerine laboratuvar şartlarında 50 ve 100 gramlık ambalajlarda ürettikleri beyaz çayda başarıyı yakaladıklarını vurgulayan Yüce, şunları söyledi:

"Şu ana kadar sipariş üzerine deneme mahiyetinde yaptığımız beyazçay üretiminden olumlu sonuç aldık. Ürettiğimiz çayları 1-2 sefer demlemeye yetecek kadar isteyenlere verdik. Beyaz çay ilaç niyetine kullanılan bir ürün. Fiyat belirlemek için henüz erken. Üretimimizi talepler doğrultusunda laboratuvar şartlarında sürdürmeyi planlıyoruz."

<http://arsiv.ntvmsnbc.com/news/349841.asp>

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White Tea Processing The Cool Way

White tea processing is fascinating. There is no heating and rolling. The tea-makers simply let nature takes its course.

Imagine: pick the fresh leaves, spread them out to wither until moisture reduces to 20%, then dry further. This is white tea processing in a nutshell. Minimal heating. No rolling.

It is a stark contrast to green and oolong tea. It does not undergo fixation, where high heat is applied to kill the enzymes and stop the oxidation.

It does not undergo rolling, where the fixated leaves are massaged into various shapes.

The making of white tea starts with the cultivation of a suitable crop.

White Tea Processing

Tea Plants

It is widely quoted that all teas are *Camellia sinensis*; what makes the type of tea different is the processing.

In practice, farmers choose the plant varieties best suited for the teas they are making.

Longjing tea is flat and spear-shaped; it favours leaves that are thin and soft. Biluochun tea is rolled into tight and curly spirals; it favours tiny leaves.

In contrast, white tea favours fat buds with lots of silvery hairs and thick leaves.

There are not many tea plants that meet this criterion. Commonly used white tea plants include:

- Fuding/Zhenghe/Fuan Dabai (Big White)
- Fuding Dahao (Big Hair)
- Fujian Shuixian (Water Sprite)

White Tea Processing

Leaf Selection

Different types of white tea are made from different leaves. The more buds it has, the younger the tea shoots, the higher the quality.

Now, in descending order of quality:

Silver Needle (Baihao Yinzhen) is made from single bud extracted from one-bud-and-one-slightly-unfurled-leaf.



White Peony (Baimudan) is made from one bud with two slightly unfurled leaves of equal length. It can also be made from one bud with one leaf.

Other white teas such as Tribute Eyebrow (Gongmei), Longevity Eyebrow (Shoumei) and the so called new or green white tea use older leaves consisting of one bud with up to 3 leaves.

White Tea Processing

Harvesting

White tea can be harvested in spring, summer and autumn.

Spring tea is the highest quality and most abundant. It makes up half of annual production. It is picked several times, with the first two rounds yielding the sweetest, fattest shoots.

Autumn tea is next best, and summer the worst. Each makes up about a quarter of annual production.

Some people complain that their white tea tastes bland. When buying, it is important to know when the tea is picked.

White Tea Processing

Withering

While leaf selection has the biggest bearing on its eventual quality, it is during the withering stage that the tea-maker's skill is put to the most stringent test.

During withering, fresh leaves are left to dry in dormant condition for up to 3 days. This is "heavy" withering. In contrast, green tea is only withered for a few hours.



The key is to facilitate the desired changes in tea chemistry while minimizing the amount of oxidation.

Ever wonder why white tea tastes so sweet? During withering, tea enzymes induce the production of sugars and theanine – but only at the right conditions.

It is a tricky affair. The factory needs to carefully monitor temperature, humidity, air-flow and light to facilitate this process.

Withering can be natural or artificial. Natural withered tea tastes better, but takes longer to produce, and so is less commonly used today. It can take place indoor or under the sun.

White Tea Processing Drying

Oven-bake the withered tea several times to reduce moisture to less than 5%. It is a quicker process than withering and takes less than an hour to complete.

As mentioned before, China's Fujian White Tea either comes from Fuding or Zhenghe county. These are the two main production regions.

Zhenghe processing differs from Fuding in one respect.

When weather permits, Zhenghe Silver Needle uses natural sun for final drying. This gives it a more toasted flavor compared to its Fuding cousin, which uses oven-drying

Source: [White-tea-processing](#)

White Tea Minimal Processing for a Rare Tea

Friday, 11 December 2009 09:35 Nong



By Helen Xu Fei

White tea is a rare type of specialty tea mainly produced in China's Fujian Province. It has longish silvery buds that are coated with fine white hairs which give it its name. The infusion of white tea is very clear, the color of pale, yellowish champagne, and the taste is mellow and smooth with no trace of the "green" sensation.

The most popular white teas types are white silver needle and white peony. The former is made of buds, and the latter is made of a bud and one or two leaves. Recent western researchers have discovered that white tea has remarkable anti-bacterial and anti-viral effects and it is a good source of flavonoids, natural antioxidant compounds.

White tea originated much earlier than Anji white tea. White silver needle was first produced over 200 years ago in Fuding County of Fujian province. Local tea planters selected unopened leaf buds and

wilted them under the sun to produce the refined dehydrated tea. This was the earliest white silver needle. The initial white silver needle was small and thin, and did not stand out compared to other local teas. By the mid- to late-nineteenth century, new cultivars with larger and fleshier leaf buds were successfully bred and transplanted at Fuding, Zhenghe and other nearby counties.

White silver needle made from these tea bushes was larger and full of white hairs and had a better aroma and taste. Since then, it has established a reputation as a superb gourmet tea and these new characteristics are now unanimously accepted as a benchmark standard for white silver needle.

Leaf grade white tea was introduced in the early 1920s, giving white tea drinkers more economical choices depending on the tea plant variety and leaf grade. Types included white peony, tribute eyebrow and longevity eyebrow.

White peony was exclusively made from white silver needle upsized-bud cultivars while both white tribute eyebrow and longevity eyebrow were made from ordinary tea bushes yielding smaller and thinner buds. The former contains more tips, the latter more leaves. In the 1960s a new processing method was invented to cater to the Hongkong market's requirement for a stronger taste. This process involves gently rolling the leaf after wilting; the additional rolling step enhances the taste but removes many of the spectacular white hairs.

Leading producers

Fuding and Zhenghe are two leading white tea producers. The former is a coastal city at the north east corner of Fujian bordering Zhejiang province, and the latter is about the same altitude but further inland. White tea from both regions has been granted GI certifications. Fuding white tea cultivars have more voluminous buds which are coated with longer hairs, while the Zhenghe white tea cultivars are slender with relatively shorter hairs.

All Chinese white tea cultivars belong to the *sinensis* sub-variety, yet with larger leaf buds over two centimeters long. In both counties, these white tea cultivars are also plucked to produce black tea, green tea and jasmine tea.

According to Fuding government, Fuding produces over 4,000 tons of white tea annually, accounting for about one quarter of its total tea output. Local news sources state that Zhenghe produced around 3,000 tons of white tea out of a total tea output of 8,000 tons in 2008.

Traditionally, over 90% of white tea is exported to overseas markets. Japan, US and Germany are leading importers, and southeast Asia is a traditional market. Increased consumer awareness of white tea's health benefits has triggered more countries, including Sri Lanka, India, and some African nations, to produce white tea.

Traditional harvesting

Traditionally, white tea was harvested during spring, summer and autumn. Spring tea has the best mouthfeel and appearance, autumn tea comes next, and summer tea brings up the rear. Spring harvest of white tea starts around mid-March and ends about mid-May. Autumn plucking takes place from late August to October. Summer white tea is no longer produced due to the below-average quality. Spring harvests (first flush) are conducted before Qingming (the fifth solar term that begins around April 5) and are chiefly plucked for the production of white silver needle, as the earliest flush yields the most succulent and voluminous leaf buds. Production of leaf grades of white tea begins around Qingming, starting with a bud and one leaf, and followed by a bud and two or three leaves. Plucking of top grade white tea should be avoided on rainy days and should wait until after the morning dew has dried. Excessive moisture causes the tea to blacken and lack briskness.

Crucial step

Withering is the crucial step in white tea production. During the process fresh leaves are dehydrated and a series of biochemical reactions slowly take place. Among all the reactions, oxidation is greatly restricted as most of the cell membranes are unbroken, which effectively blocks the activity of oxidative enzymes.

There are natural withering and heated withering processes that are used according to weather condition.

Natural withering is carried out on fine days and is mostly used in the making of gourmet grade white tea. A full cycle of natural withering takes 40-60 hours. Fresh harvests are spread one leaf deep on wilting screens made of bamboo slices. The loaded wilting screens are either racked in a well ventilated room (indoor withering) or shifted outdoors and moved indoors to cool at intervals (combined withering).

Indoor withering takes longer while combined withering engages more labor and prudent judgment on the time the product is exposed to the sun. To optimize indoor withering quality, some producers have built greenhouses to serve as withering rooms. The withering is completed when the leaf buds turn white or the leaves turn grey-green and the edges curl up. The moisture content is then around 10-20%.

Wilted leaves are collected for drying, either in the sun or by baking. Dried tea needs to be sorted to remove broken pieces or leaves with obvious color variance, followed by a light bake to increase aromas and further bring down the moisture level.

Heated withering is applied during rainy days by blowing hot air into and ventilating the withering room continuously. Normally, room temperature is controlled to around 25°-35° Celsius. The withering cycle is reduced to 16-24 hours. By the end of the withering session, some desirable biochemical reactions are still not completed, thus the leaves are accumulated into small piles and kept for 3-5 hours to speed up the reactions without further dehydrating the leaves. White tea thus produced would lose some complexity in both aroma and mouthfeel. Heated withering consumes more energy, so this method is only used during periods of continuous rain.



Distinct category

White tea consumption in the domestic market is very marginal, and quite a few people still confuse the name with Anji white tea.

In fact, there are obvious differences between the two.

Firstly, white tea has both bud-only grades and leaf grades, while Anji white tea has only leaf grades.

Secondly, leaf grade white tea is of medium-leaf size, frosted with white hairs, while Anji white is the small-leaf

type, its tiny hairs almost unnoticeable.

Thirdly, white tea is by itself a category with distinctive taste, while Anji white is a green tea, and this may explain why Anji white rose to fame and popularity much faster in the domestic market.

White tea is another type of tea that can be stored. In rural area of north Fujian, aged white tea is used to treat measles, fevers and mouth ulcers as it is believed to be the most cooling of all teas.

Source: [Tea Coffee Asia](#)

Manufacturing process of China tea - White tea



Knowledge

White tea was first discovered during the Tang Dynasty, about the sixth century, and soon became the choice of the royal courts. White tea has undergone much change since 1885, when specific varieties of tea bushes were selected to make Silver Needle 白毫银针 and other specialty white teas. Modern white tea appeared after that. Chinese export of these fine white teas began in 1891.

White tea is named from its unique characteristics, covered with white hair. 白毫 The unique quality is obtained as a result of a special processing procedure of “nofrying and no crushing.” The annual production of white tea is relatively small, just 2,000 tons, about 0.1% of that of black tea. White tea is mostly produced in Fuding, Zhenghe, Jianyang, and Songxi of Fujian Province in China, and this accounts for more than 90% of the annual world production of white tea.

The unique quality and flavor of white tea are derived from a special growthplace, special breed, and special processing method. Dried white tea appears natural and elegant outside, and tastes sweet and refreshing.

There are many grades of white tea, depending on the different plucking criteria 采摘标准; these are Silver Needle with White Hair 白毫银针, White Peony 白牡丹, Gongmei 贡眉, and Shoumei 寿.



Silver Needle is made of the pure bud, while White Peony is made of the bud and one or two leaves of Dabaicha (福鼎大毫茶为原料) or Shuixian varieties 水仙种. Gongmei is made from the Qingzhong

variety, and Shoumei is manufactured from fresh leaves without the bud. White Peony is the most dominant grade of white tea. White Peony can be further classified into many grades, according to the tea tree variety. For example, Dabai 大白, meaning big white tea, is made from the variety of Fuding Dabaicha 福鼎大白茶; Shuixianbai 水仙白 is made from the Shuixian variety 水仙茶树种; and Xiaobai 小白, meaning small white tea, is made from the Qingzhong variety 奇种

Manufacturing of White Tea

White tea is manufactured with minimal treatment, and it is rapidly steamed and dried, leaving the leaves fresh. White tea is harvested when the buds on the trees are still covered with fine white hair and the leaves have not yet fully opened. After plucked, fresh tea leaves are sun-dried and dried, and the leaves are kept relatively fresher than those of green or black tea. With a lighter and sweeter taste after processing, white tea is closer to fresh tea leaves than green tea, and is far different from the other varieties of tea. Usually, white tea is processed with only two procedures, withering and drying. Sometimes, the same processing method, such as sun-drying, can be looked upon as both withering and drying. The earliest manufacturing method is sun-drying for white tea. Modern diverse white tea can be manufactured by three methods of sun-drying, airing, and basket-frying. White tea can be manufactured in the spring, summer, and autumn, but not the winter. Usually, spring white tea has premium quality, autumn white tea is next, and summer white tea is the lowest grade.

Silver Needle with White Hair

Silver Needle with White Hair is named after the color quality and shape of this type of tea. Its color is white like silver, and its shape is long and like small needles. The material for Silver Needle is new bulky bud 单芽.

Some are made from the separated bud from the aired material, which have the bud and one or two leaves plucked from Dabaicha and Shuixianzhong. There are two dominant processing methods for this grade of white tea originating from Fuding



The processing method in Fuding is more prevalent. The first step for Silver Needle processing is sun-drying. The buds are spread evenly on sieves or withering mats right after they are plucked from tea trees, and insolated directly under the sun. Keeping for one whole day under the strong sunshine in spring is sufficient, upon which the white tea might be nearly dry. The nearly dried white tea can be baked on slow fire until fully dried. It will take about 30 minutes for 250 g of tea buds to dry at 40–50°C in a baking basket. In the case of hot and wet days, insolation for 2 days is needed. After the tea buds are nearly dried, they can then be baked on slow fire. For rainy or foggy days, direct baking with slow fire is necessary. The processing method in Zhenghe is a little different from that in Fuding.

Airing under the shadow or mild sunshine prior to direct sunshine drying is practiced. Mostly dried tea buds are moved under strong sunshine to dry completely. The duration for the whole process is often 2–3 days. Dried white tea, covered with white hair and silver shining, has a bulky shape and vivid color and luster 富有光泽. The quality of white tea produced in different areas is different due to the existing differences in the processing methods practiced. Fuding Silver Needle appears silver white and tastes clear and delicious, whereas Zhenghe Silver Needle appears silver gray and tastes fresh, brisk, and luscious or full body.

White Peony

White Peony is made from the bud and one or two leaves. Although Gongmei and Shoumei are the lower grades and made from different materials, their processing techniques are similar to White Peony, as described here. White Peony can be processed with the two simple steps of withering and basket drying (萎凋及焙干) .

Withering is the key step that determines the final quality of white tea. There are usually three withering methods for White Peony: sunshine withering, airing, and low-temperature withering. Airing is the most used method for White Peony. The requirements for airing in spring are 18–25°C, and relative humidity (RH) of 67–80%. Usually, a temperature of 30–32°C and an RH of 60–75% are more acceptable for summer and autumn airing. The airing time is often 52–60 hours. Low-temperature withering could be used instead of airing during rainy days. The withering room is heated by the pipeline, keeping at 20–32°C and RH of 65–70%. A temperature of 29–30°C is most suitable for withering. The withering time for airing is often more than 36 hours. When tea bud and leaves are half dried, they can be basket dried twice. Sunshine withering could be used on sunny spring days, too. Fresh leaves can be insulated 暴晒 for 25–30 minutes under slight sunshine during morning or at dusk, at 25°C and RH of 63%. Tea leaves should be moved into a prewarmed withering room. Ordinarily, two to four times of sunshine withering is best for processing of White Peony. However, sunshine withering is not favorable in the strong sunshine in summer.

After withering, basket drying is the last processing step for White Peony. Timely drying can keep the color and taste good, prevent variation, and enhance the aroma of tea. The basket drying of White Peony can be done over 15–20 minutes at fire temperature of 70–80°C. If tea leaves are only half dried, basket drying should be done twice 复焙, with the first drying at 100°C and the second at 80°C. A baking machine could also be used instead of baskets, with operating parameters 参数 similar to those of basket drying.

Source: [jiangtea](#)

How to Steep Tea

Edited by Maluniu, Maniac, David, TJean

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Pour the water over the tea. If you're making black tea, go ahead and pour the boiling water directly over the tea to begin the steeping process. For green, white or herbal tea, take it off the heat and wait 30 seconds until the boil stops, then pour it over the tea. This prevents the delicate leaves from overcooking, which would result in a bitter taste. If you want to make it an exact science, use a thermometer to take the water's temperature so you can control the flavor of the tea.^[2]

- **Black tea** is best steeped at a temperature of 203 degrees Fahrenheit (95 degrees Celsius).
- **Green tea** is best steeped at a temperature of 160 degrees Fahrenheit (74 to 85 degrees Celsius) before you pour it over the tea.

- **White tea** should be steeped at a temperature of 185 degrees Fahrenheit (85 degrees Celsius).
- **Oolong tea** is best steeped using a temperature of 203 degrees Fahrenheit (95 degrees Celsius).
- **Herbal teas** should be steeped using a temperature of 203 degrees Fahrenheit (95 degrees Celsius).

Source: www.wikihow.com/Steep-Tea

Brewing Tips

Water Temperature

Water temperature is essential for preparing the perfect cup of tea. When prepare delicate green or white teas, allow the boiling water to cool a bit to 80-85 degree celsius. Pu-erh, Oolong and black teas require hotter water and use 90-95 degree Celsius water for Pu-erh, Black tea, and Oolong tea. Particularly using Gong fu brewing method, a high water temperature in combination a heat keeping Yixing teapot are required.

Source: [Grand Tea](#)