Comparisons in Qualities and Flavor of Baihau Oolong Teas Made by Different Processes

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ABSTRACT

In this thesis, fourteen kinds of Baihau Oolong tea with different manufacturing processes, especially different in stirring, withering, and pile fermentation times, were prepared. The differences in the content of free amino acids, sugars, total phenols, catechins, and volatile compounds in tea leaves were compared. The quality, including red and yellow light absorption, L value, a value, and b value, and the preference of the tea infusion were also compared. Twenty kinds of free amino acids, including theanine and gamma-aminobutyric acid, were identified in the Baihau Oolong teas. The content of sucrose, glucose, and fructose was found to decrease with the increasing in the fermentation degree, individually. The content of total phenols and that of catechins in the Baihau Oolong tea with two times of stirring and two times of withering were found to be the highest. The red and yellow light absorption ability of the Baihau Oolong tea infusion, were found to increase with the increasing of fermentation degree. The panel test results showed that to have the higher panel acceptance, the Baihau Oolong tea should be prepared in a process having at least three times ’ stirring and three times withering. The panel test results and the analysis results of the volatile compound in the tea showed that the following volatile compounds probably were the important compounds to contribute the characteristic flavor of Baihau Oolong tea. They are 1-hexanol, benzenemethanol, benzeneethanol, epoxylinalool, 3,7-dimethyl-1,5-octadiene-3,7-diol, nerol, geraniol, linalool, alpha.-cadinol, hexanoic acid, tetradecanoic acid, neral, geranial, methyl salicylate, beta.-myrcene, and 9,9-dimethyl-9,10-dihydroanthacene.

Keywords : Baihau oolong tea ; Oolong teamanufacturing process ; analysis ; volatile compounds ; Oolong tea

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