

# SMART TEA LEAVES STORAGE SYSTEM

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## ABSTRACT

Nowadays, tea is the most widely expended beverage in the world after water. In traditional, tea is an aromatic drink in a general way pouring hot water on ripe and dry tea leaves. While in new era, tea is a cold beverage that usually to be fond of by young generation especially kinds of bubble milk tea that famous around Asian. Besides that, tea has many kinds of good health benefits that help to solve or reduce the risk of some diseases, cancers, high blood pressure and others according to research.

Since tea is benefit and has high demand for human, the freshness and condition of tea leaves are important by controlling the environment condition in order to protect it from being staling. In combination with the idea of maintaining tea freshness, a smart storage system was designed to control environment which suitable for storage. Therefore, any factors that influenced the freshness of tea leaves in storage period were essential. In the process of ensuring the freshness of tea, this storage system was equipped with five sensors and a main PIC circuit board. Generally, temperature degree, light intensity, moisture contents and humidity can be detected through different sensors according to tea condition. Then, values of each sensor be generated and categorized into three main groups: good, satisfactory and poor condition. The values of five variables were displayed through LCD of the system.

The report was begun with project introduction, aim and objectives. Block diagrams, tables and figures were used as evidences and for better understanding in overall processes. The next two chapters explained the main components of electrical and electronic in literature reviews whereas hardware and software designs in methodology. Furthermore, experimental testing results and discussion on overall project were presented in following chapter. Last but not least, final conclusion and further improvement of project were explained.