

## Evaluation of Polyphenolics Compounds in Cold Brewed Indian Tea

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**Abstract :** Tea (*Camellia sinensis*) is known as nature's low calorie wonder drink. Since ancient times hot consumptions of tea is very much popular. We have observed that many heat sensitive secondary metabolites which get destroyed on heating, moreover by people, who are permanently live at higher altitude or the members of high altitude expedition team, are deprived of various tea brewing facilities like electricity, fuel, etc. and the hence cold decoction of tea might be a good alternative. In this backdrop present study aims at the analysis of antioxidants like polyphenols, flavonoids and free radical scavenging activity as well as the l-theanine concentration of different types of cold brewed teas like black, green, white and oolong and compared with its hot decoction. Further, we also analysed in details about the bioactive components by using HPLC followed by green synthesis of nanoparticles. The study highlighted that the difference between the concentration of antioxidant in cold and hot brewed tea is insignificant and hence intake of cold decoction will be beneficial to health.

**Keywords :** antioxidants, flavanoid, polyphenols, HPLC, nanoparticles

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