ABSTRACT

Effects of Different Brewing Temperatures and Times on The Antioxidant Activity of Black Tea (Camellia sinensis) using The DPPH Assay

Literature Review

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Black tea, a popular beverage. is a dietary source of polyphenols that are associated with a variety health benefits. Potential health benefits of tea consumption are often attributed to the antioxidant activity. Tea is rich in polyphenols, including catechins, theflavins, and thearubigins which are thought to contribute to free radical scavenging activity. The process of brewing tea is one of the critical points because this process allows the extraction of bioactive compounds from tea. Methods of brewing black tea vary worldwide. This study determined antioxidant activity in terms of the 1,1-Diphenyl-2-picrylhydrazyl (DPPH) scavenging ability of black tea under different brewing temperatures and times. In this review, literature searches were carried out through PubMed, Science Direct, DOAJ, and Google Scholar. The range of publication years for the articles in this review is 2010 – 2020. The results indicate that the antioxidants activity is significantly affected by temperature and time of brewing. The brewing temperature that produce the highest antioxidant activity was 100°C. The brewing time that produced the highest antioxidant activity in this review was 9 – 10 minutes. The results of the optimal temperature and time of brewing in this literature review can be used as a consideration for tea brewing that has antioxidant benefits.

Keywords: brewing temperature, brewing time, antioxidants, black tea