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Short Communication

Use of Singlet Oxygen for Chemical Investigation of Antioxidant Property of Some Natural Black Tea Extracts

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ABSTRACT

Black tea shows antioxidant properties due to the presence of Epicatechin (EC), Epigallocatechin (EGC), Epicatechin gallate (EGc), Epigallocatechin gallate (EGCg) and Gallacatechins. Extracts of some of the brands tea have been used to study their antioxidant property. Dye-sensitized photooxidation of thiourea by singlet oxygen was carried out to monitor the antioxidant property of tea extracts. The activity of tea extracts was observed based on the yield of sulphur. It was observed that as the concentration of tea extracts was increased, yield of sulphur was decreased indicating an enhancement in the antioxidant activity of that extract. Singlet oxygen is the active oxidizing species in this oxidation. It was concluded that lower is the amount of sulphur thrown out, more is the activity of that the extract.

Keywords: Black tea extract, Antioxidant, Singlet oxygen.