

Tea (*Camellia sinensis*) is native to the southern regions of China and parts of India, Laos, Thailand, Vietnam, and Myanmar [1]. Tea is said to have first been discovered as a drink and medicine in China around 2737 BC. It was then introduced to Japan during the early 13th century and to Europe in the 16th century, then to America, Africa and other regions of the world [1–3]. Tea is presently cultivated in over 30 countries around the world and the tea beverage is second only to water in terms of worldwide consumption [4]. Based on the oxidation of the polyphenols in the tea leaves during the fermentation process, tea has been classified into three types: green tea, black tea, and oolong tea [4]. Green tea refers to non-fermented tea, in which the oxidation of the tea polyphenols, called catechins, is prevented by quickly heating the leaves after harvest to inactivate the main oxidising enzyme, polyphenol oxidase (PPO), and thus, most of the catechins are preserved during the processing. Black tea refers to fully fermented tea and oolong tea is semi-fermented tea. In these teas, aerobic oxidation of the tea leaf polyphenolics is allowed to occur and the catechins are enzymatically catalysed to form thea flavins and thearubigins. For black tea, the fermentation reaction is promoted to maximize the oxidation of the catechins but for oolong tea, it is usually stopped half-way before completion [1, 4]. Green tea is a rich source of catechins, which account for up to 30% of the leaf dry weight [4]. A typical composition of catechins (polyphenolics) and other components in the green tea is shown in Table 1. As catechins can donate hydrogens from the hydroxyl groups in their structure, they have been found to have excellent antioxidant activities, expressed through their free radical scavenging ability being more powerful than vitamin C, vitamin E, or β -carotene [5–7]. They have also been shown to chelate transition metal ions, modulate oxidant and antioxidant enzymes, and affect gene expression [5]. The catechins are receiving considerable interest for their potential benefits on human health. The recent in vivo and epidemiology studies have linked the green tea catechins with the prevention of some skin and liver cancers [8–11]. Other studies have linked the catechins with a reduced development of lung, gastric, and breast cancers [12–14]. In addition, green tea and its catechins have been linked with reductions in cardiovascular disease, dental decay, obesity, diabetes, and an improvement in the immune system