THE USE OF HIGH PERFORMANCE LIQUID CHROMATOGRAPHY FOR THE STUDY OF THE CHANGES UNDERGONE BY TEA POLYPHENOLS IN SOLUTION

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The taste of tea is known to be related to the polyphenols and oxidised polyphenols in solution (Wickremasinghe 1978). The increasing popularity of liquid and canned teas has led to studies on prolonging the shelf life of tea solutions which have been found to lose their characteristic tea taste rather rapidly. The use of reverse phase HPLC provides a rapid method of semiquantitatively screening the polyphenols in solution (Hoeffler and Coggon, 1976). This study describes the development of a method for the analysis of tea liquors by HPLC. The results obtained show that degradative changes in tea liquors are due to fungal contamination and autoxidative changes. Fungal contamination

is shown to result in a hydrolysis of the gallates while autoxidative reactions result in the production of a group of compounds collectively called thearubigins. Contrary to earlier findings it was evident that theaflavins did not breakdown on storage provided fungal growth was inhibited. These results are useful in the formulation of tea concentrates and beverages.

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