

[54] ENZYMATIC TREATMENT OF BLACK TEA LEAF

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[58] Field of Search 426/49, 52, 597; 435/267

[56] References Cited

U.S. PATENT DOCUMENTS

3,117,004	1/1964	McFarlane et al.	99/28
3,959,497	5/1976	Takino	426/52
4,051,264	9/1977	Sanderson et al.	426/52
4,472,441	9/1984	Clark et al.	426/597 X
4,478,939	10/1984	Adler-Nissen	426/52 X
4,483,876	11/1984	Petersen	426/49 X

FOREIGN PATENT DOCUMENTS

134718	7/1974	India .
1249932	10/1971	United Kingdom .
1380135	1/1975	United Kingdom .
1413351	11/1975	United Kingdom .
1546508	5/1979	United Kingdom .

OTHER PUBLICATIONS

Windholz, M. et al., *The Merck Index*, 10th edition, Merck & Co., Inc., N.J. 1983, pp. 791, 1007.

Sanderson, G. W. et al, "Use of Enzyme in the Manufacture of Black Tea and Instant Tea", ACS Symposium Series, 1977, vol. 47, pp. 12-26.

Sanderson, G. W., *Geruch-und Geschmacksstoffe*, Verlag Hans Carl, West Germany, 1975, pp. 65-97.

Roberts, J. *Sci. Food Agric.*, 3, 193-8 (1952).

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[57] ABSTRACT

A process for the enzymatic treatment of black tea leaf is disclosed. In particular, black tea leaf is wetted with water containing tannase and one or more cell-wall-digesting enzymes, such as cellulase, pectinase, papain, or hemicellulase, prior to extraction. The enzyme-moistened tea leaf is incubated in a closed system at room temperature for a few hours. The enzyme-treated tea is then neutralized with a suitable food grade base and the enzymes are inactivated by heating. The resulting treated tea can be extracted and processed in the usual manner or dried for use in tea bags in the usual manner. As a result, a higher yield of tea is obtained and the resulting instant tea has better solubility in cold water than conventional teas. The bag tea products an infusion which does not form haze at cold temperatures.

10 Claims, No Drawings