Supercritical carbon dioxide in the problems of improving consumer properties and economic characteristics of production and consumption of green Vietnamese tea

© Truong Nam Hung,^{1,2} Almaz K. Fachreev,² Farid M. Gumerov,^{2*+} Farizan R. Gabitov,² Rustem A. Usmanov,² Daniyal G. Amirkhanov,² and Rafinat S. Yarullin³ ¹ Hanoi Technical University. Hanoi. Vietnam.

² Department of Theory of Heating Engineering. Kazan State Technological University. K. Marx St., 68. Kazan, 420015. Republic Tatarstan. Russia. Phone: +7 (843) 231-42-11. E-mail: gum@kstu.ru ³ JSC «Tatneftekhiminvest-Holding». Kazan. Russia.

*Supervising author; ⁺Corresponding author

Keywords: green Vietnamese tea, supercritical carbon dioxide, consumer properties of tea leaf, decaffeination.

Abstract

Influence of the suggested procedures (circulation of supercritical carbon dioxide and periodical decompression in the system "initial raw material – supercritical CO₂") of treating tea leaf on extractability of target components by aqueous phase in the process of "brewing" has been studied. Research has been carried out in order to reveal some thermodynamic characteristics of the process of supercritical fluid CO₂decaffeination as applied to green Vietnamese tea.