

## 資料

## 緑茶とトルマリンで染色された布の抗菌性および マイナスイオン発生特性

小笠原 由利子  
宮本 葉  
木下 瑞穂  
広島大学  
広島大学  
広島大学

### Antibacterial Activities and Negative Ion Generating Properties of Fabrics Dyed with Green Tea and Tourmaline

Yuriko Ogasawara, Shiori Miyamoto and Mizuho Kinoshita  
*Hiroshima University*  
1-1-1 Kagamiyama, Higashi-Hiroshima 739-8524 Japan

Shirting fabrics were treated with green tea and tourmaline and their antibacterial activities against *Staphylococcus aureus* and generating behavior of negative ions were investigated. The boiled down liquid of dry green tea was diluted 4- and 8-fold, A liquid and B liquid, to be used for dyeing. The number of the colonies of *Staphylococcus aureus* and the generated negative ions were counted after the cloths dyed with A liquid and B liquid were treated with tourmaline and by heating at two different temperatures (80-90°C, 145-155°C). The number of the colonies and the negative ions increased with concentration of tourmaline. The thermal treatment at higher temperature promoted higher generation of negative ions. The cloths treated with not more than 0.2 % of tourmaline after dyeing A and B liquid and the ones only dyed with B liquid almost came up to the standard of bacteriostatic activity of 2.2. It is concluded that these experimental conditions are applicable to clothing life.

(Received March 29, 2006)

(Accepted Publication November 13, 2006)

**Key words** : green tea 緑茶, tourmaline トルマリン, shirting 綿金巾,  
*staphylococcus aureus* 黄色ブドウ球菌, antibacteria 抗菌,  
negative ion マイナスイオン