

# checking of anti microbial and anti cancer effects of white tea extract

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**Abstract:** Introduction: White tea is provided green leaf of tea (*Camellia sinensis* (L.) O. Kuntze) that belongs to the Theaceae family like other types of tea. Current studies on anti microbial and anti mutagenesis effects of white tea are very low. The goal of this study is checking of anti microbial and anti mutagenesis effects of white tea extract. **Materials and Methods:** After hydroalcoholic extract of white tea providing, the effects of this extract antimicrobial checked out on *Staphylococcus aureus* with well diffusion and disc diffusion methods. And the Minimum Concentration of Inhibitory and bactericidal was determined with MIC and MBC methods. White tea Anti mutagenesis effects checked out in top agar growth medium with mutant bacteria of *Salmonella typhimurium* (TA100). This extract was analyzed with GC-MASS to study of effective ingredients. **Results:** The gained results of not grown halo with disc and well diffusion in order were 37mm and 30mm. And minimum inhibitory and bactericidal concentration in order were 0.75mg/ml and 1.56mg/ml. The results of anti mutagenesis checking showed that the bacteria didn't have any growth in present of this extract, but mutation in histidine manipulation gene created in present of positive control (sodium azayd) and causes *Salmonella typhimurium* growth. The extract analyzed results showed the 95% of this plant is caffeine. **Conclusion:** According to antimicrobial and anti mutagenesis effects of white tea with that side effects in invivo conditions, this extract may use against infection and cancer as a herbal medicine.

**Keywords :** Key words: MIC, MBC, Anti mutagenesis effects, White tea, *Staphylococcus aureus*, *Salmonella typhimurium*

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