

# **Analysis of the effects of wood odor on work efficiency**

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Several studies have reported that wood odor has a relaxing effect on humans. This study aims to examine the effects of wood odor on workers' relaxation and the ability to maintain moderate concentration in an office space. Therefore, the effects of wood odor on the performance of multiple tasks and physiological and psychological aspects during work were investigated. Two commercially available essential oils made from cypress were selected as experimental materials. The experimental subjects were 20 university students, who completed five simulated tasks in the experiment. Autonomic nervous activity and salivary oxytocin levels of the subjects were used as physiological indices, and the stress response scale and a subjective questionnaire were used as psychological indices. A gas chromatograph-mass spectrometer was also used to qualitatively and quantitatively analyze the volatiles. The results showed that  $\alpha$ -pinene and 1,8-cineole were the main compounds in the experimental room. On comparing the rooms with essential oils to the control room, the number of correct responses increased and the error rate decreased. The participants were more relaxed during the tasks performed in the essential oil room according to the results of the physiological indice analysis. These results suggest that wood odor can help people relax and improve work efficiency and can be used in offices.