**Objectives:** To investigate the stress-relief and mood-change effects of extractives from the leaves of Abies sachalinensis.

**Methods:** The essential oil was steam-distilled from the leaves of Abies sachalinensis (Todomatsu) and it was a generous gift from Japan Aroma Laboratory. Ten healthy university students (male 8, female 2) participated in the present study. After informed consent was obtained, the subject sat on a chair in a climatic chamber in which temperature and relative humidity were kept at 24 °C and 50%, respectively. After ten min rest in a room, first salivary collection for cortisol, amylase and questionnaire with mood check list short form 2 (MCL-S.2) were performed. Second measurement was done after 20 min rest without aroma and then further 20 min later with aroma, third measurement was done. None felt discomfort during the experiment. Differences between the three measurements were examined using Friedman test, then if there is any significant differences, Scheffe’ test was performed.

**Results and Conclusion:** Regarding the emotional changes, higher “relaxation” score and lower “anxiety” score were observed in the cases with aroma (third measurement) than those without aroma (second measurement, \(p<0.05\)). “Pleasantness” score did not show significant changes. No significant differences between first and second measurements.

Salivary stress parameter such as cortisol decreased significantly in the subjects with aroma (first vs. third, \(p=0.001\)). There was also significant difference between second and third measurements \((p<0.05)\). Salivary amylase activity showed lower value with aroma than the resting value (first vs. third, \(p<0.05\)).

From these findings, essential oil from the leaves of Abies sachalinensis (Todomatsu) assumed to improve mood status and have a stress-relief activity.

**Keywords:** Abies sachalinensis, Essential oil, Mood state, Stress marker, Todomatsu