

This study aims to investigate the antioxidant effect of aromatic volatiles of three common aromatic plants, *Lavandula dentata*, *Mentha spicata*, and *M. piperita*. In this study, Kunming mice subjected to low oxygen condition were treated with the volatiles emitted from these aromatic plants through inhalation administration. Then the blood cell counts, and the activities and gene expressions of antioxidant enzymes in different tissues were tested. The results showed that low oxygen increased the counts of red blood cells, white blood cells, and blood platelets of mice, and aromatic volatiles decreased their counts. Exposure to aromatic volatiles resulted in decreases in the malonaldehyde contents, and increases in the activities and gene expressions of superoxide dismutase, glutathione peroxidase, and catalase in different tissues under low oxygen. In addition, as the main component of aromatic volatiles, eucalyptol was the potential source that imparted positive antioxidant effect.

Treatment with the volatiles emitted from aromatic plants through inhalation administration improving the antioxidative capability in mouse.

