

ZERTIFIKAT · CERTIFICATE



DARTSCH SCIENTIFIC GMBH Institute of Cell Biological Test Systems

herewith certifies that the product named

E-Liquid of the brand Happy Liquid „Erdbeer-Menthol“ with 6 mg/ml nicotine

manufactured and distributed by

Happy People GmbH, D-80337 München, Germany

has been tested for its toxic effects after long-term exposure by using
in vitro tests with cultured human lung cells.

Results of the Test Assays

The investigations with cultured human lung cells (cell line A549) have shown that vaping of the e-liquid did not cause a significant decrease in cell vitality in comparison to untreated controls at test concentrations up to 10 vol% of the primary extract and a continuous exposure period of 12 days. In contrast, tobacco smoke caused death of nearly all cultured lung cells at considerably lower test concentrations. Thus, the investigations with long-term exposure demonstrate that vaping of the e-liquid “Erdbeer-Menthol” of the brand Happy Liquid with 6 mg/ml nicotine has a much lower toxic effect on cultured lung cells than tobacco smoke.

Schongau – December 1, 2014

Prof. Dr. rer. nat. Peter C. Dartsch
Diplom-Biochemiker