

ZERTIFIKAT - CERTIFICATE



Dartsch Scientific GmbH Institute for Cell Biological Test Systems

herewith certifies that the products named

- **“Menthol“ with 18 mg/ml nicotine**
- **“Strawberry-Menthol” with 6 mg/ml nicotine**

manufactured and distributed by

Happy People GmbH from D-80337 München, Germany

has been tested for its mutagenic potential by using
the Ames MPF Aqua TA98/100 test.

Test Results

The Ames Aqua test was conducted with two histidine-dependent strains of *Salmonella typhimurium*, namely TA98 for the detection of frameshift mutations and TA100 for the detection of base-pair substitutions. Both e-liquids did not show any mutagenic potential after „normal“ vaping with 6.2 watts for all test concentrations in the absence and in the presence of metabolic activation by S9. In contrast, tobacco cigarette smoke was tested positive for mutagenic activities and bacterial cytotoxicity in all tests \pm S9 activation. Thus, the results suggest that vaping of “Menthol” or “Strawberry-Menthol” liquid from the brand Happy Liquid has a much lower mutagenic risk than smoking a tobacco cigarette.

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