

Toxicological risk assessment of AIR L.O.G.[®] *pro*

Excerpt of the expert opinion (No.:2020-05-13aSV) of Mag. Dr. Karl Dobianer, European Registered Toxicologist, 17 June 2020

AIR L.O.G.[®] *pro* continuously applied at 0.05 - 0.1 ml/m³/hour at person occupancy:

The exposure with hydrogen peroxide can be regarded as safe to most people.

The exposure with formic acid can be regarded as safe to most people.

The exposure with micelle building phytoextracts poses no significant risk.

General

The statements in this risk assessment apply equally to babies, greater children, and adults.

The risk assessment is based on an application rate of 0.1 ml AIR L.O.G.[®] *pro* /m³ per hour.

Risk assessment - Ingredients and Application

The calculated output of hydrogen peroxide by applying 0.09 ml/m³ AIR L.O.G.[®] *pro* via ultrasonic fogging is 1.14 ppm (~1.6 mg/m³). Product application tests showed a hydrogen peroxide concentration in the room of 0.1 ppm (i.e. 0.14 mg/m³) which conforms an 8.8% recovery.

Implementing these data to a kinetic model, the actual room concentration in a steady state (equilibrium between cold fogging output and elimination) of hydrogen peroxide lies approximately between 0.004 ppm and 0.086 ppm, with a highly probable value of about 0.014 ppm or lower.

The threshold limit value - time-weighted average (TLV-TWA) in Austria (MAK value) is 1 ppm, the general population (consumer) long term DNEL for inhalation is 0.15 ppm, so it can be concluded that the above stated results are values with a sufficient level of safety (MAK value - safety factor of 71).

0.1 ml AIR L.O.G.[®] *pro* contain about 0.25 mg formic acid. The Austrian MAK value is 9 mg/m³, the general population (consumer) long term DNEL for inhalation is 3 mg/m³. It can be concluded that a dose of 0.25 mg formic acid is a value with a sufficient level of safety. Even if the formic acid would not be decomposed (which is not the case in reality), it would need 12 hours to reach the long term DNEL.

The micelle building phytoextracts consist exclusively of several food related substances and some registered food additives. The exposures to the micelle building phytoextracts during cold fogging of AIR L.O.G.[®] *pro* are so low that it can be concluded that no significant risk can be deduced from an exposure with these substances.

Remarks

The risk assessment was conducted aiming an acceptable risk (defined by the safety levels) which is applicable for almost all individuals. However, in some rare but very unfavourable situations, such as high concentrations, long-term exposures, low air exchange and very sensitive persons, they could suffer to some extent from health effects. This can never be fully excluded.

For the above stated assertions, it is understood that the ultrasonic foggers work properly, and the declared maximum output quantity is not exceeded.

No testing was performed by Dr. Karl Dobianer himself. The conclusions given in this expert opinion exclusively refer to the test results and the information given by CuraSolutions.



Dr. Wolfgang Furlinger, CEO

W. Neustadt, August 13th, 2020

Place and Date

Summary approved



Dr. Karl Dobianer
MAS - Toxicology, European Registered Toxicologist

| | | |
|----------------|--|---|
| | Unterzeichner | Mag. Dr. Karl Dobianer |
| | Datum/Zeit-UTC | 2020-08-16T14:33:47+02:00 |
| | Prüfinformation | Informationen zur Prüfung der elektronischen Signatur finden Sie unter: https://www.signaturpruefung.gv.at |
| Hinweis | Dieses mit einer qualifizierten elektronischen Signatur versehene Dokument hat gemäß Art. 25 Abs. 2 der Verordnung (EU) Nr. 910/2014 vom 23. Juli 2014 ("eIDAS-VO") die gleiche Rechtswirkung wie ein handschriftlich unterschriebenes Dokument. | |