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# **Test Report**

## **Tests on the DAIKIN Photocatalytic Air Purifier**

### **MC704VM**

#### **Part VI**

#### **Measurements of the ozone emission**

## 1 Objective of the test

The objective of the test was to determine the emission of ozone at the power setting "turbo" in the negative ions mode ("relax-mode").

## 2 Performance and results of the test

The room air purifier was tested in a room of 42 m<sup>3</sup> which is completely independent of the ambient air. The ozone-concentration in the room air was measured with a continuous ozone analyser (Type: O<sub>3</sub> M 41) which operates on the principle of ultraviolet absorption. The measuring range is programmable from 0.1 to 1 ppm with a minimum detectable of 1 ppb during 30 seconds response time. During the measurementst the measuring range was 0 – 0,1 ppm according to 0 – 0,2 mg/m<sup>3</sup>.

The following measurements were performed:

1<sup>st</sup> measurement (measuring time: 1 hr)

Basic ozone concentration in the test room ..... 2 µg/m<sup>3</sup>

2<sup>nd</sup> measurement (measuring time: 0.5 hr)

Ozone concentration at power stage "turbo" ..... 3 µg/m<sup>3</sup>

3<sup>rd</sup> measurement (measuring time: 0.5 hr)

Ozone concentration at power stage "turbo" and "relax-mode" on ..... 4 µg/m<sup>3</sup>

The 2<sup>nd</sup> and the 3<sup>rd</sup> measurement were performed approx. 5 cm above the air outlet of the room air purifier.

## 3 Assessment of the results

In Germany, there are two MIC – limiting values (MIC: Maximum Imission Concentration) for the assessment of ozone emissions:

- ½ h average: 120 µg/m<sup>3</sup>
- 8 h average: 100 µg/m<sup>3</sup>

From the afore mentioned measuring values it can be concluded as follows:

1. The room air purifier contributes only in a negligible extent to the pollution of the room air with ozone.
2. The ozone production of the room air purifier is far beyond the actual German limiting values.