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Measurements of ozone in the outlet of an AirFree air cleaner

Item tested and test objective

The test object was an AirFree air sterilizer, labelled 230 V, 50 Hz, 400 mA, 46 W and serial no 53002309. According to the client the AirFree unit is manufactured under license of U.S. Patent 5,874,050. The unit arrived to SP on February 27, 2001. The objective was to check for any change of ozone concentration in the air when passing through the test item. The test was performed on May 29, 2001. The test results apply only for the item tested.

Test procedure

The test was carried out in a laboratory room at SP. The air cleaner was started two hours previous to the ozone test. The ozone instrument used for measurements was a Dasibi UV-instrument, model 1003-PC, and newly calibrated. The background ozone level in the room was measured at the base of the Airfree unit and compared with concentrations at the air outlet on top of the unit. Ten readings were taken at both sampling points during 8 minutes respectively and the average for each point was calculated.

Results

The average ozone reading was 19.5 ppb at the inlet and 14.4 ppb at the outlet.

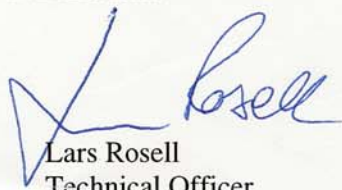
Summary

The ozone concentration was significantly lower (at 99 % certainty level) at the air outlet of the AirFree unit compared to the inlet. The reduction could, at the given test environment, be calculated to 26 %.

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