United States Environmental Protection Agency National Risk Management Research Laboratory Research Triangle Park NC 27711

Research and Development

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Project Summary

Ozone Generators in Indoor Air Settings

Raymond S. Steiber

This report gives information on home/office ozone generators. It discusses their current uses as amelioratives for environmental tobacco smoke, biocontaminants, volatile organic compounds, and odors and details the advantages and disadvantages of each.

This Project Summary was developed by EPA's National Risk Management Research Laboratory, Research Triangle Park, NC, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).

Overview

This report presents information on home/office ozone generators. It discusses their current uses as amelioratives for environmental tobacco smoke (ETS), biocontaminants, volatile organic com-

pounds, and odors and details the advantages and disadvantages of each. Ozone appears to work well against household odors and ETS, but caution needs to be exercised in its use because of the production of byproducts such as formaldehyde. Ozone has biocidal effects, but its use in household settings is limited by the high concentrations needed for complete kills. Ozone has decremental effects on lung function in humans that persist for 24-48 hours.

In experiments conducted at the indoor air test house, each of the three ozone generators studied produced concentrations in excess of the Occupational Safety and Health Administration limit for workplace exposures. In addition, when interior doors were left open, adjoining rooms were also subjected to such exposures. Total ozone decay times for all the concentrations studied did not exceed 12 minutes.

Raymond S. Steiber is the EPA Project Officer (see below).

The complete report, entitled "Ozone Generators in Indoor Air Settings," (Order No. PB96-100201; Cost: \$17.50, subject to change) will be available only from

National Technical Information Service

5285 Port Royal Road Springfield, VA 22161 Telephone: 703-487-4650

The EPA Project Officer can be contacted at

National Risk Management Research Laboratory

U.S. Environmental Protection Agency Research Triangle Park, NC 27711

United States Environmental Protection Agency National Risk Management Research Laboratory (G-72) Cincinnati, OH 45268

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