

CABIN AIR QUALITY IN COMMERCIAL AIRCRAFTPrincipal Investigator:

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Background:

DOT study due early 1990. Industry studies: Piedmont; JAL; SAS.

Objective:

Measure concentrations of chemical species as a function of smoking (smoking vs. nonsmoking section), time (selected components), and ventilation condition on commercial airline flights.

Outline:

DC-10 and DC-9 aircraft; 8 flights/aircraft type; 6 smoking and 2 nonsmoking flights/aircraft type. Portable samplers operated by BYU personnel in smoking, nonsmoking, and "boundary" locations on each flight.

Measurements/Determinations:

CO, CO₂, nicotine, 3-ethenylpyridine, RSP, NO/NO₂, solanesol, temperature, relative humidity, ozone, aldehydes, mutagens. Total nicotine/cotinine in urine of sampling personnel.

STATUS:

Cooperation obtained from Northwest Airlines. Two flights completed. Site visit by Max Eisenberg (Oct 2) to finalize study design. Work to be completed by end of 1989. Report: Early 1990 (?).

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