

**Moot AR, Ledingham KM, Wilson PF, Senthilmohan ST, Lewis DR, Roake J, Allardyce R (2007)  
Composition of volatile organic compounds in diathermy plume as detected by selected ion flow  
tube mass spectrometry. ANZ J Surg 77:20–23**

LINK - <https://www.ncbi.nlm.nih.gov/pubmed/17295814>

Abstract

BACKGROUND:

There is some evidence that surgical plume may pose a risk to health professionals, but the risks posed by volatile organic compounds have not been thoroughly investigated.

METHODS:

The composition of volatile organic compounds in diathermy plume produced during surgery was analysed by selected ion flow tube mass spectrometry.

RESULTS:

Hydrogen cyanide (3-51 parts per million), acetylene (2-8 parts per million), and 1,3-butadiene (0.15-0.69 parts per million) were identified in the plume.

CONCLUSION:

Although there is no evidence of adverse health effects from the volatile organic compound in diathermy plume, the evidence that it is safe to breathe this plume is lacking. Therefore, we would recommend the use of smoke evacuators where practical.