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Volatile Profiles of MSTO-211H Malignant Mesothelioma Cells

Little LD, Cole L, Allen L, Carolan V & Haywood-Small SL

Biomolecular Sciences Research Centre, City Campus, Sheffield Hallam University, Howard Street, Sheffield, S1 1WB







Figure 2: MSTO and RPMI chromatograms. Changes in abundance were observed for 2-butoxy-ethanol, benzaldehyde, 2-ethyl-1-hexanol, 2-butoxyethyl acetate and nonanal.





Figure 4: 0.5ppm VOC standards * identified in MM breath analysis studies.

Conclusions

- Cell viability was <90%, suggesting that VOCs were identified from live cells rather than cell death or apoptosis.
- 2-butoxy ethanol increased whereas 2-butoxyethyl acetate decreased specific changed likely to be from cellular metabolism.
- Very similar profile between cells and controls high background signal emitted from cell culture plastic-ware.
- PCA score plot showed separation of MSTO-211H and RPMI results.
- Changes in benzaldehyde, 2-ethyl-1-hexanol and nonanal reported in previous MM breath analysis studies.
- Further method development required to identify specific VOCs released from MM cells.

References

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🕅 liam.d.little@student.shu.ac.uk 🔰 @liamdlittle@Sarah_HSmall in Liam Little