Volatile Compounds

Dimitrios Spiliotopoulos, PhD

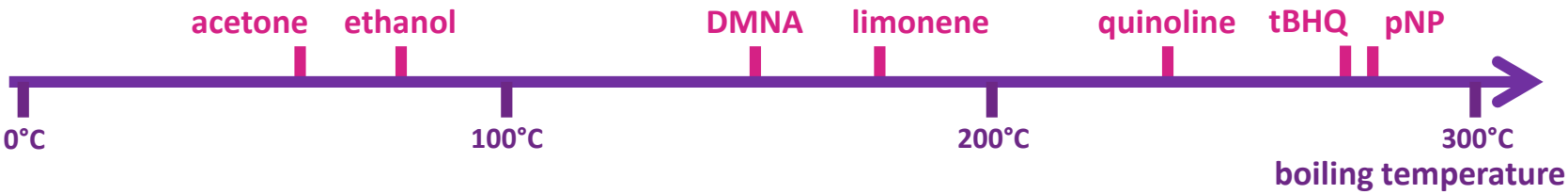
April 25th, 2019

Ames MPF / Ames II User Meeting

Working with Volatile Compounds
A Caveat

- You might need to work with volatile test items and/or volatile impurities may be present in your test item

- We will not claim that all of the test items presented here are volatile



but they behave like it and we addressed the problems we had accordingly.

Working with Volatile Compounds

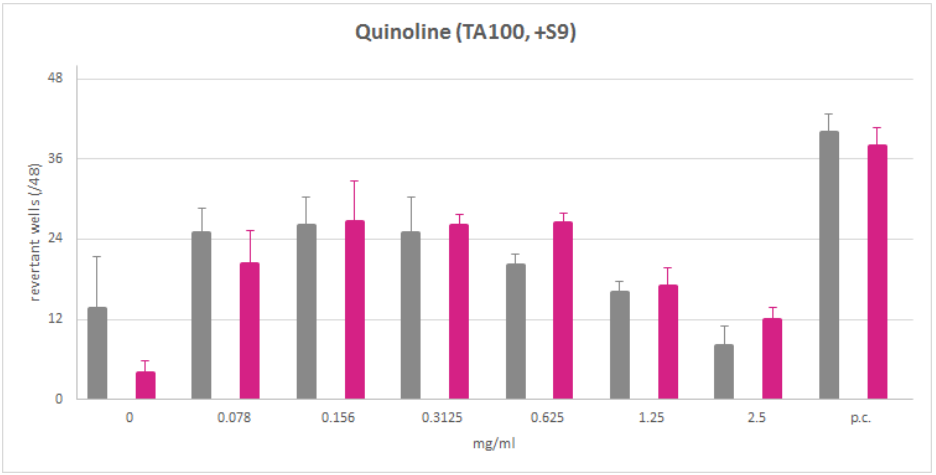
Keep Them In!

- Volatile test items are treated in the Ames in Petri dishes using bags or boxes to contain the volatilized sample

- For the Ames II and Ames MPF we recommend the use of impermeable foils

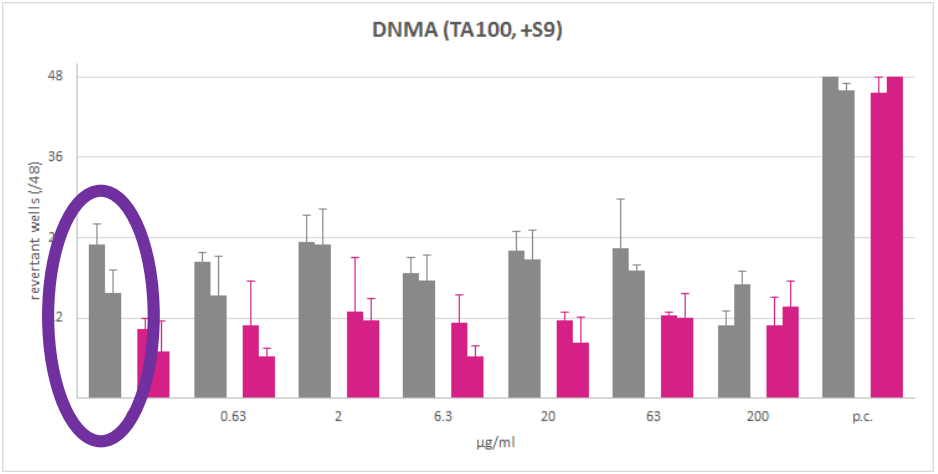
Working with Volatile Compounds
A New Approach

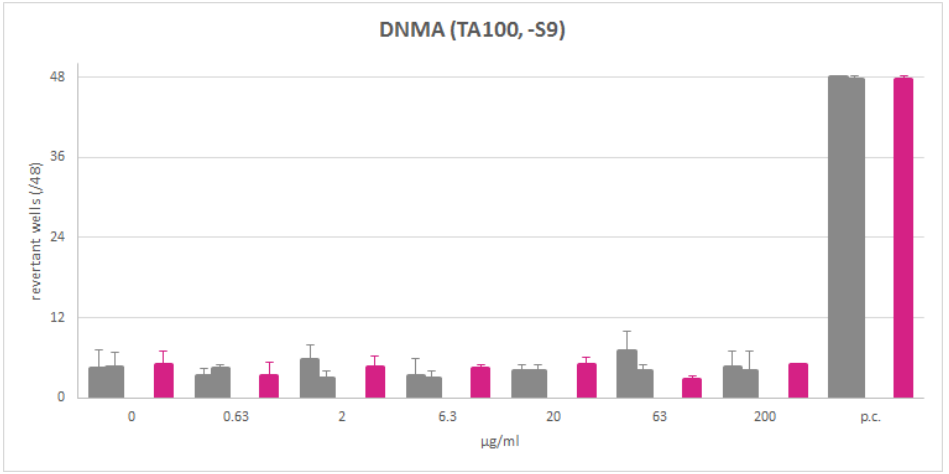
Quinoline data kindly provided by a client.



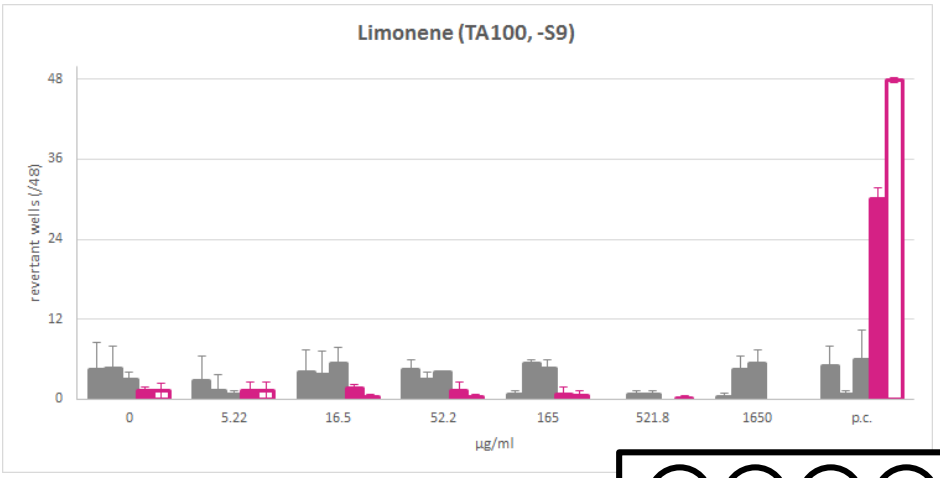
usual experiment

with foil



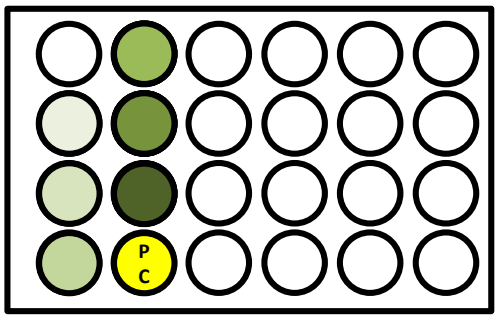


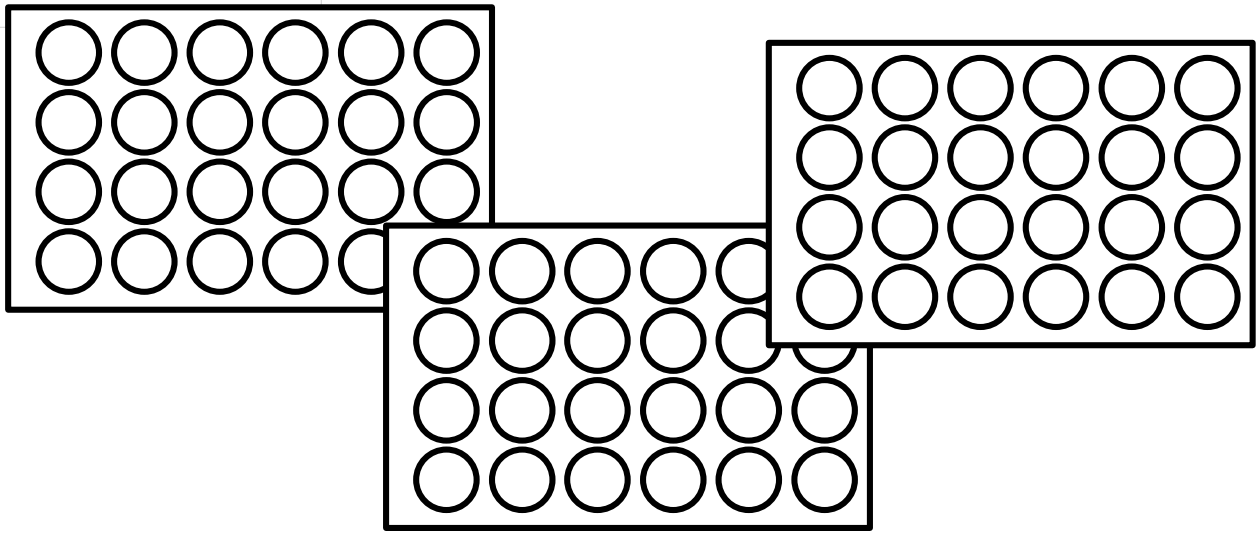
Working with Volatile Compounds
A (Slightly) New Approach



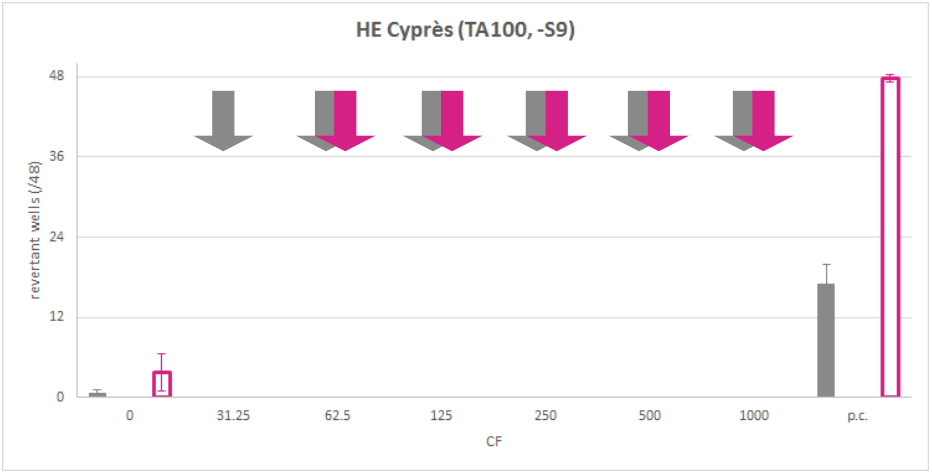
usual experiment

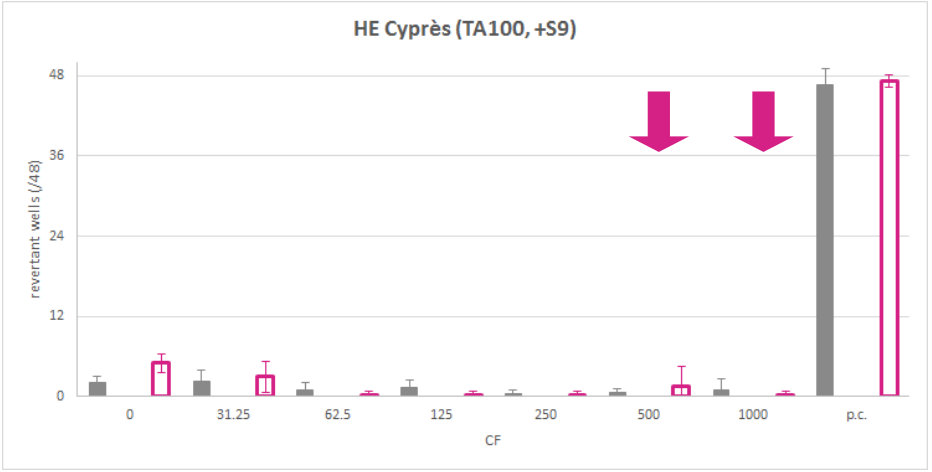
with foil





Working with Volatile Compounds
Does It Work With Real-Life Samples?





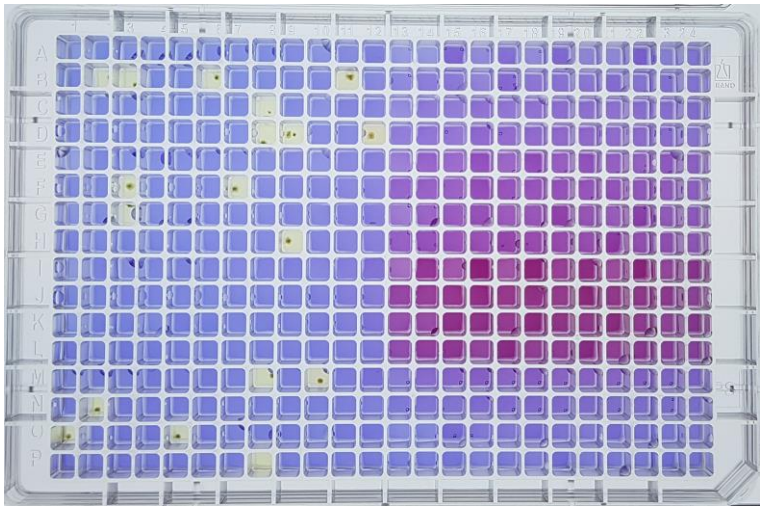
usual experiment

indications of toxicity

Working with Volatile Compounds
Conclusions

- Volatile samples can be tested using the Ames MPF assay!

- Inappropriate control values or color indications might indicate that volatility is an issue.



***tert*-butyl hydroquinone**