



Technical paper (ref 1.2)

Probe home page

AIRONAUT™ versus ESSENTIAL OILS

Probe's system is not based on the use of essential oils. These compounds are mainly aldehydes, ketones and/or esters. The term 'essential oils' is very misleading in this context. They are not 'essential' and their action in odor removal is very limited. Being 'organic' they **do** weakly interact with those organic molecules e.g. mercaptans, which are foul smelling, but the interactions are mainly a result of very weak polar attractions. Carbonyl groups present in the 'oil' weakly attract the malodorous molecules but there is **no** chemical interaction. Unlike the Probe AiroNaut™ system in which these molecules are chemically and structurally changed within the microdroplets, these so called 'essential oils' **do not change** the nature of the foul-smelling molecules and they may indeed be re-released into the air to give further problems.

The use of these materials in odor remediation is, in my view, very much overstated and they are **very expensive**. TLV values for most of the organic compounds present in essential oils are very low and if they are improperly used they are a fire hazard. The substances used to formulate Probe AiroNaut™ are all so called 'food grade' materials and **we take great care to ensure that TVL values for ALL** the components in AiroNaut™ are never exceeded when used in our Rotary Atomisers.

I firmly believe that the use of essential oils in this industry is grossly overstated. The way they interact with foul-smelling molecules is very limited indeed and I have absolutely no reservations in saying that they may themselves present a further hazards tin their own right.

Dr Peter Carty

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