

Our client is searching for effective means of reducing or removing the **malodour** (unpleasant smell) produced when **organic matter** is being digested, naturally degrades or is industrially processed / incinerated. We are seeking removal and/or absorption technology to address this unpleasant odour or a means to stop the volatiles migrating & then subsequently adhering to nearby surfaces. An initial “screening test” and longer term methodology for quantifying odour on surfaces, including skin, would also be of interest.

When organic material degrades, by whatever means, it produces/emits a complex mixture of volatiles. Several of these volatiles have been identified, one of the most odorous is Dimethyl Trisulphide (TriSulphide). We are interested in selectively removing various malodorous molecules, (as indicated below), from effluent streams where the particle size is 0.5 -5.0 micron.

The objective is to **reduce or remove or absorb** the malodour and not to mask it. Although the primary objective is not to mask the odour, particularly effective masking technologies may however be of interest.

The malodorous compounds that have been identified as being of interest to remove include:

Compound	Empirical formula	Density	Molecular weight
2-Ethyl-3,5-Dimethyl Pyrazine	C <sub>8</sub> H <sub>12</sub> N <sub>2</sub>	0.964 g/cm <sup>3</sup>	136
Dimethyl Trisulphide	C <sub>2</sub> H <sub>6</sub> S <sub>3</sub>	1.22g/cm <sup>3</sup>	126
2-(1-Methyl Ethyl) Pyridine	C <sub>5</sub> H <sub>5</sub> N	0.956g/cm <sup>3</sup>	79
4-Acetyl Pyrazole	C <sub>5</sub> H <sub>6</sub> N <sub>2</sub> O	1.19g/cm <sup>3</sup>	110
Cyclohexanone	C <sub>6</sub> H <sub>10</sub> O	0.953g/cm <sup>3</sup>	98

Innovative non-toxic technology / materials to selectively remove such molecules and other similar pungent volatiles must work exceptionally quickly, i.e. in seconds. They must also be stable at ambient temperatures until use and have the ability to work in complex, harsh, possibly high temperature environments. The solution should be adaptable to suit, amongst other manifestations, a small personal device, be economically viable, available for mass manufacture internationally and have strong associated IP.

We are open to solutions from all sources but believe the following areas may be fruitful:

- Innovative absorbent materials (e.g. advanced activated carbon, Sepiolite etc)
- Encapsulation technologies
- Waste water/effluent processing. (e.g. developed for use by human operator)
- Agricultural or farm waste industry
- Mass produced “Zeolites” focussed on similar volatiles
- Life science solutions
- Industrial process scrubbers

Our client is continually investing in product development and has appropriate R&D facilities to develop innovative technologies. Eventual products will have global markets. The client is searching for innovative solutions and will consider any reasonable commercial arrangements including licensing in, purchasing, strategic alliances and partnering arrangements.

Please send preliminary information on any proposed opportunity – including a short description, technical and marketing advantages and initial suggestions on possible methods of co-operation to – Mrs Elaine Rhodes, Operations Manager. Thank you!