

ATTRACTANTS FOR MOSQUITOES, MIDGES etc

The chemical ecology of mosquitoes and other biting arthropods is slowly being unravelled. The way they find their hosts for blood meals and the way they find places to lay their eggs are now becoming clearer to scientists. Detection of odours by the insects concerned is basic to such activities and now the chemicals that make up these odours are being identified and used to lure the pest insects into traps for both monitoring and control purposes.

Through very successful collaborations with researchers in this field, AgriSense is now able to offer attractant dispensers for a number of biting insects as described below.



ATTRACTANTS FOR BLOOD-SEEKING FEMALES



Octenol is a well known attractant for blood seeking female mosquitoes as well as some other biting insects. AgriSense offer a dispenser containing 1 or 2 ml of 1-octen-3-ol. The 1ml dispenser will last 30 to 45 days depending on temperature while the 2ml dispenser will last up to 60 days, again depending on temperature. Both types of dispenser are individually packaged in aluminium lined pouches and, while unopened, have a storage life of up to 2 years. Once taken out of their packaging, they will start to dispense the attractant.

These dispensers are used in many designs of CO₂ traps as well as the BG Sentinel trap (see separate leaflet – Traps for Mosquitoes).

Other sizes of Octenol dispensers are possible.

DISPENSERS CONTAINING HUMAN SWEAT COMPONENTS

The BG Mesh Lure

Working in collaboration with BioGents GmbH in Germany, AgriSense has developed a three component lure based on substances extracted from human sweat. The lure contains lactic acid, ammonia and a carboxylic acid in ratios that have been optimised to attract anthropophilic species such as *Aedes aegypti*, *Aedes albopictus* and *Aedes polynesiensis*. It is also effective on those *Culex* and *Anopheles* species that feed predominantly on human beings.

The BG Mesh Lure is intended for use in the BG Sentinel trap. It is packaged in an aluminium lined pouch for good shelf life and immediately starts dispensing the sweat odour when taken out of its packaging. In use, this lure will last for 4 to 6 months depending on climatic conditions.



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Bespoke Lures made from Human Sweat Components

AgriSense has developed a number of lures based on human sweat components. These lures have been tailor-made for certain trap designs especially those that use CO₂ as their main attractant. It is known that octenol lures can sometimes be unattractive or even repellent to some highly anthropophilic species of mosquito. In these circumstances, the sweat components provide an efficient alternative. The Asian Tiger Mosquito (*Aedes albopictus*) is a good example where this phenomenon occurs. For an example of such a bespoke product please visit the following web site [www.actipowertrap.it] and view the Activix lure. AgriSense can offer a range of bespoke lures based on human sweat components for any mosquito trap. Please contact us for details.

DISPENSERS FOR ATTRACTING EGG-LAYING FEMALES

Atraedes Lure

Through collaboration with researchers at The University of Minas Gerais in Belo Horizonte, Brazil, AgriSense has formulated an oviposition attractant for *Aedes aegypti*. This mosquito uses chemical cues to find suitable egg laying sites that consist of water with a high organic matter content. The attractant has been formulated in a controlled release polymer suitable for use in the Mosqui Trap. The *Atraedes* lure will last about 30 days when placed in a Mosqui trap



Culex oviposition pheromone

When a mosquito of the *Culex* genus lays its eggs it leaves a pheromone on its egg raft that is used by other egg-laying females of the same species to find that oviposition site. This compound is now available to use in traps or to seed water courses that are then treated with a larvicide. Please ask for details of bespoke formulations that AgriSense can offer based on this oviposition pheromone.