



The pest controller arrives, carrying no more than an unobtrusive suitcase

Bedbug detection taken to a new 'remote' level

A remarkable new, insect remote, bedbug detection service has been developed by Merlin Environmental and is now being operated for the benefit of clients.

The use of specially trained dogs to detect bedbugs has become a familiar concept. It's a technique that has certainly caught-on in the USA and, to a lesser extent, in the UK. Somewhat of a sceptic, **Pest** editor, Frances McKim spent a day out in London last year with Adam Juson and two of his detection dogs and came away convinced. See **Pest** issue 8 March & April 2010.

Dogs are unsurpassed in their ability to detect any scent. But what happens when you can't get the dog to the venue in question? To solve this, Merlin Environmental (www.bedbugcontrol.co.uk) has come up with a remote screening test, claimed to be the first in the world. So, rather than take the dog to the bedbug scent, the bedbug scent is brought to the dog. Dog and bedbug can even be in different countries.

Based on the well established Remote Air Sampling for Canine Olfaction (RASCO) system for detecting explosives, Merlin has developed its own bedbug detection procedure.

Known by Merlin as Remote Insect Scent Tracing or RIST, samples of air and air-borne dust from the suspected location are collected using a specialist portable sampling machine. The machine sucks air and dust through an odour-neutral filter designed to trap the particles of dust and any target odours contained in the air.

The machine is systematically worked through the target area. Each filter is marked with a reference number to ensure that the source of the filter can be identified and linked to the host location. Upon completion of the sampling, the filters are sent to the Merlin detection facility for analysis by the company's specially trained sniffer dog – Carlos.

The sample filters are laid-out in carefully controlled environmental conditions for



Air samples are taken using the specialist portable sampling machine

Carlos to inspect. The dog has been trained to sniff the filters and indicate which filters contain traces of bedbug odour. If Carlos indicates a filter contaminated with target odour, he will sit and stare, until called off and rewarded by his handler.

RIST is intended to give a positive or negative result for a given environment. The data generated differs greatly to active dog searches. An active dog will tell the handler that a single bug is located within the area being screened. A RIST dog will identify that



Once collected, the samples are packed individually in a protective atmosphere



At base, the samples are unpacked and opened



The filter is removed from the protected atmosphere



The filters are loaded into the scent wall

the filter has been exposed to bedbug scent and so the environment from where it came warrants closer scrutiny – be that by human or canine screening. Adam Juson, a partner in Merlin Environmental, has been instrumental in developing this remote bedbug technique. He explains: "Several clients came to us to develop a detection system where rapid results can be gained from remote locations, for example to verify customer complaints on cruise ships. Imagine the



Star of the show, Carlos systematically checks the samples

logistics of trying to get a dog team onto a ship that spends no more than one night in any given port. We realised it was much easier and cheaper to get a sample sent to the UK for analysis."

To date this new RIST system has been successfully used to analyse a range of infestations in overseas hotels and on cruise ships by Merlin themselves. However the technique is available for use by other pest control companies – the kits are sent out for the company to capture their own samples. These are then sent to Merlin for screening.

RIST may have its limitations, but it has proven to be yet another useful tool in the war on bedbugs.



That's the one! Carlos indicates this filter has been exposed to bedbug scent

Bed-Bugs

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