FAQs

What is the probability of false positives i.e. the system alerting on non-asbestos fibres?

ALERT does not make a decision based on a single fibre to avoid the chance of false positives. To reach its statistical confidence level of 99.98% ALERT will analyse 10-30 fibre rotations in as little as a few seconds, depending on the number of fibres in the sample air, before making a decision. With a 99.98% statistical confidence this means that the ALERT unit could be incorrect (ie: no asbestos is present) once in 100 detection events.

Can the ALERT distinguish the different groups of asbestos fibres (i.e amphibole vs. chrysotile)?

Both groups of asbestos are dangerous and ALERT detects both but it does not currently distinguish between them. However future development of our analysis software may enable differentiation between the two groups by combining intelligent analysis of the scattering pattern and differing magnetic susceptibility between asbestos types.

Will extremely dusty environment distort the ALERT's results?

ALERT has been tested and alerted for asbestos in very dusty demolition environments. However a heavy concentration of dust particles in the airborne environment may lead to the asbestos detection time being slightly increased. Similar to traditional air filter sampling, ALERT too faces limitations if the environment is so dusty that the air is clogged. A high concentration of airborne particles may also decrease the performance of ALERT. In general, we need at least 50% of the fibres to be asbestos when detecting serpentines, or 20% for amphiboles.

Does ALERT detect respirable asbestos fibres as defined by WHO's definition (diameter less than 3 μm, length greater than 5 μm and a length to width ratio of greater than 3:1)?

ALERT assumes that no asbestos fibre is safe and so doesn't discriminate based on size. We detect particles that are both larger, and smaller than those defined as respirable by the WHO, since if there are respirable fibres present in the air, then in all likelihood there are non-respirable fibres too, and we want to measure as many as possible as quickly as possible to provide a rapid warning.

Does the use of an ALERT negate the need for the approved Stage 3 Clearance Air Tests?

The first of its kind, ALERT is intended as an early warning device designed for use by professionals who might disturb or damage asbestos during the course of their work. Its objective is to offer a vital first line of defence where none currently exists to ensure people are not subjected to prolonged unintentional exposure caused by work or proximity. It was not designed for post-abatement, clearance or constant air monitoring at very low fibre concentration levels. Therefore in its current stage ALERT is a complementary technology and not a replacement for current methods for asbestos monitoring.

Can ALERT give me an asbestos fibre count and concentration level?

An indicative particle and fibre count is provided along with an alert as to whether if enough fibres have rotated for ALERT to make a statistical analysis to 99.98% confidence that airborne asbestos fibres are present or not in the sample analysed. It does not currently provide a count of asbestos fibres or concentration levels of asbestos fibres within that population.

How is the ALERT kept asbestos free? Does it expel asbestos through the system and how is it to be cleaned post use?

Sample air drawn through the unit passes through a sealed disposable HEPA-CAP filter before reaching the pump ensuring no contaminated air is expelled. It also uses a particle-free sheath air flow around the sample air which means asbestos fibres (or other particulates) in the sample airflow are very unlikely to come into contact with the mechanical structure and detection zone underneath the metal top plate until they reach the aforementioned HEPA filter. However to minimise any potential risk to the user, only Alert Technology personnel are authorised to remove the ALERT top plate which allows access to the inner mechanics and optical detection chamber. Should the tamper proof fastenings indicate removal the product warranty will be void. Potential contamination at the entry point of the sample inlet tube is possible and needs to be wiped clean after use, as is the case with the conventional statutory filter-sampling equipment. ALERT's rugged plastic case is capable of a thorough wipe down and misting after use as long as water is not sprayed directly into the air inlet. The device should not be submerged.

How do I know if the ALERT is functioning correctly and when it requires a filter change or service?

ALERT is programmed to run through a number of health checks on start-up, testing: filter and airflow, laser power, battery and storage memory. If the system registers a fault both LEDS on the display panel will flash blue and the ALERT will not function. A system error will be noted on the screen and also via the System Messages when your ALERT is connected via PC to the ALERT Data Viewer software. ALERT's software will also advise you on the display screen and via the Data Viewer Software when your 12 month service is due.