



# STAT PEEL<sup>®</sup>



## Identifier

IDENTIFY YOUR EXPOSURE

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The development of new materials that may pose health risks calls for advanced monitoring methods using the latest technology.

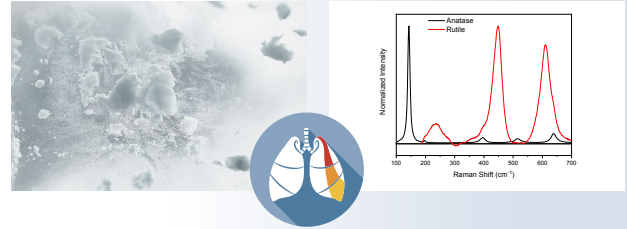
Stat Peel developed the Identifier to detect airborne particles of the latest materials while keeping in mind the negative health effects of previous “wonder” materials (asbestos, etc.).

Originally developed to detect CNTs, further R&D has shown that other commonly used materials, both new and old, can also be monitored with the Identifier system. Using the integrated Raman spectrometer for quantitative analysis, the Identifier can detect CNTs, graphene, respirable crystalline silica (RCS), titanium dioxide, carbon black, metal oxides, polymers, boron nitride, and some active pharmaceutical ingredients (API), among many other materials.

### Identify your exposure!

How exposed are you? The Stat Peel Identifier detects particles by substance, not just by size.

Inhaled particles can cause life threatening illnesses like silicosis, lung cancer and many other diseases.



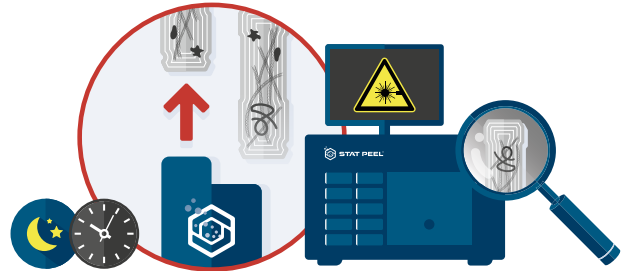
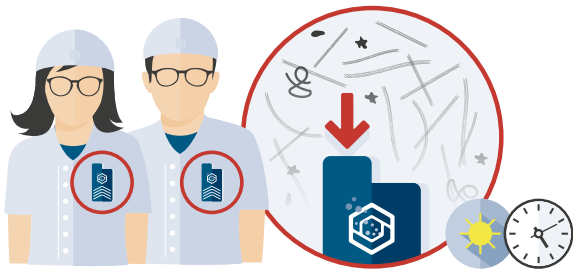
Raman shift of TiO<sub>2</sub> polymorphs anatase and rutile

**At Stat Peel, we have developed a compact badge sensor and an integrated bench-top sized optical reader to monitor personal and stationary exposure to respirable particles.** Our Raman spectroscopy approach is superior to other solutions because it is material-selective and it detects some materials at sub-nanogram limits with no need to transfer samples to an outside laboratory. The Identifier can uniquely distinguish the target material from other particles and background aerosols. This is especially useful for situations where there are multiple materials present, some with similar properties. The Identifier can distinguish, for example, different polymorphs of TiO<sub>2</sub>, such as anatase and rutile.

### The Identifier works in two steps:

**1.** The employees wear lightweight badges during their activities. The badge collects the respirable and inhalable fraction of airborne materials using an inertia-based size separator on a custom functionalized membrane.

**2.** At the end of a shift, the badges are inserted into the reader, which selectively detects your target material using Raman spectroscopy and reports and stores personal exposure.



**Our solution can uniquely distinguish the target material from background aerosols and is capable of detecting sub-nanogram amounts. The fully-automated system requires no special training to use, and is capable of monitoring both individual employees and locations within a facility. All analysis is done on-site so the exposure data remains proprietary. The reports generated from the exposure data will show proof of compliance with recommended exposure limits for employee safety.**

The Identifier can be integrated into a company network for remote monitoring and access.

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