



# TRACE PARTICLE DETECTION

## WHAT IT IS

Trace particle detection describes a technique that can detect the presence of a targeted substance in the tiniest amounts that cannot be seen by the human eye.

## WHY CUSTOMS USES IT

Customs is responsible for protecting Australia's borders from the threat of terrorism and the entry of illegal and harmful goods.

Technology plays an important role in Customs ongoing ability to effectively screen the millions of passengers, mail items and cargo consignments entering and leaving the country.

Trace particle detection allows Customs officers to find the slightest trace (measured in nanograms - which is one billionth of a gram) of a targeted substance.

Customs uses trace particle detection technology for both narcotics and explosives.

## HOW IT IS APPLIED

Sampling of trace particles can either be done by suction or by wiping a surface. The samples are then inserted into the detectors for analysis.

Positive results provide presumptive indications that the articles being examined may contain or have been in contact with the target substances.

## MACHINES USED BY CUSTOMS

Customs uses a number of different trace particle detection machines.

These are used in a number of environments, including airports, seaports, cargo and postal facilities around Australia. They are used to search for the possible presence of targeted substances on passenger baggage, and individual mail and cargo items.

The machines are also used in conjunction with other Customs technologies, including x-ray and detector dogs.

## TRACE PARTICLE DETECTION EFFECTIVENESS

Trace particle detection is a very effective drug and explosives detection tool. It assists Customs officers to defeat a wide range of sophisticated concealment methods.

It is used in drug detections at the border every day and has been instrumental in multiple drug seizures.

As with all of Customs technologies, trace particle detection is only one of a range of risk-assessment methods used to conduct and/or advance a search.



For information on any Customs matters, contact the Customs Information and Support Centre on 1300 363 263 or email [information@customs.gov.au](mailto:information@customs.gov.au) or browse the website [www.customs.gov.au](http://www.customs.gov.au)