

ALTI LLC is developing game changing technology to detect and identify explosives and other hazards. We are actively searching for partners to confirm our analyzer's performance in this area as part of a Field-testing Campaign. We can also safely generate and monitor nitric oxide for breathing therapy including the potential treatment of Covid-19 as a separate endeavor.

## Method

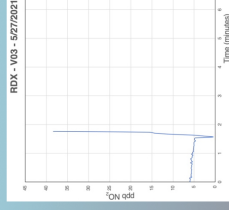
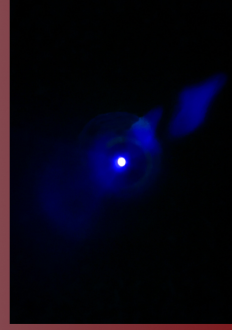


We test for five representative explosives: TNT, RDX, NG, TATP and PETN.

To measure the amount of trace explosive compounds, we convert them to NO<sub>2</sub> which can then be detected by 405 nm laser light.

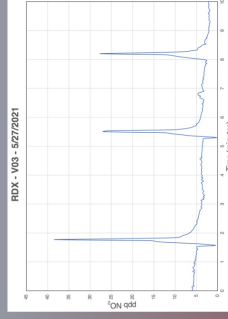


To achieve high performance we use thermal decomposition cavity ring down spectroscopy (TD-CRDS). This photo shows the laser beam after reflecting between two mirrors over 8000 times to cover a total distance of 1 kilometer. 625 million reflections occur during each quarter-second measurement.



When the sample of RDX is presented to the inlet, the response is almost immediate.

The noise level is less than 100 ppt.



Responses peak consistently with the concentration of air pollution produced by decomposition of explosives flowing through the system. The signal is enhanced by radical chain amplification by factor of 25 to 100 times.



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