

# Is Fire Department becoming like CSI?

## '\$40,000 device detects substances' 'chemical fingerprint'

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Photo by Victor Cristales



Abilene Fire Department firefighters, from left, Jim Campbell, Charles Galco and Cody Davis practice using an Ahura Scientific hand-held Raman spectrometer Wednesday. The device quickly identifies chemicals in unknown substances.

Station 5 of the Abilene Fire Department has a new -- and expensive -- "toy" that will allow personnel to quickly identify hazardous materials, said Lt. Greg Goettsch.

The hand-held detection device had been on the department's wish list for several years, but with a price tag of more than \$40,000, it was too expensive, he said.

The Fire Department began exploring all funding avenues before finding a grant through the Department of Homeland Security this year. The grant allowed them to purchase the device, which Goettsch called the Ahura Defender, as well a second device called the MSA Serius that detects and identifies gases.

The Ahura device works by shooting a laser at an unknown sample and taking a reading of how the laser interacts with the chemicals in the samples, said Scott Fitzpatrick, product specialist for the Ahura company.

"The reading produces what is called a chemical fingerprint," he said. "It gets matched to what we have in our database, much like how the FBI compares fingerprints."

The laser can shoot through glass and plastic baggies, eliminating the need for the user to touch an unknown sample at all.

The device will be useful to the hazardous material team at Station 5, who previously had to send samples of unknown materials to labs, which was not time or cost effective, Goettsch said.

"We cover 19 counties and we do sometimes run into an unknown material," he said. "... it used to take hours or days to identify (a substance) but this machine takes only 60 seconds."

Goettsch said that the device will save a lot of time, money and trouble for the community because of the shorter amount of time it takes to identify the unknown sample.

"Any time we can save the taxpayers time and money is a good time," he said.

Though the Fire Department will primarily use the device, it will also be used to help the Abilene Police Department identify explosives and narcotics.

It can also be used in emergency rooms when a victim comes in with an unknown substance, Goettsch said.

<http://www.reporternews.com/news/2008/apr/16/afd-like-csi-when-it-comes-to-chemicals/>