

# Case Study

## Stemming the flow of narcotics in Turkey with Gemini handheld analyzers

How do you stop the flow of narcotics funneling through Turkey's busiest airport? Istanbul Atatürk International Airport is a portal for approximately 65 million passengers annually. But it's also a port of entry for a robust narcotics trade from sources all over the world, with massive amounts of drugs hidden in luggage, in commercial shipments of produce, and more.

The key to putting a dent in this traffic is active interdiction, on-the-spot, real-time detection at the airport with quick and reliable, credible results that will stand up in court. This is now achievable with the portable, quick-response Thermo Scientific™ Gemini™ Handheld Analyzer. The Gemini Analyzer helps identify a broad range of narcotics, unknown chemicals and explosives in the field quickly, safely, and confidently using FTIR and Raman spectroscopy in a single instrument. It has been used on many occasions to detect and identify narcotics that individuals or organizations were attempting to smuggle into or through Turkey. The Gemini Analyzer is the first and only integrated Raman and FTIR handheld instrument in the world, providing complementary and confirmatory testing in a single, field-portable device.

### BLG Chemical Technologies

in Turkey strives to bring end users together with the most advanced technology to meet customer needs and the constantly evolving threats that the public faces. As such, BLG, Thermo Fisher Scientific's area distributor, has sold a number of Gemini Analyzers to Customs Enforcement officials who manage Ataturk Airport. A significant number of international flights from regions that are known for the manufacture of narcotics pass through Ataturk Airport. Effective narcotics detection and interdiction is often achieved by a unique team effort involving skilled enforcement officials, trained drug-sniffing dogs, and the Gemini Analyzer. Here are a few examples:



### Bonsai

In one instance, more than 260kg of material that was packaged as glass cleaning and repair material arrived on a plane from China. Drug sniffing dogs at the airport signaled that the product might possibly contain narcotics. Utilizing the Gemini Analyzer, agents were quickly able to determine – within minutes - that the product was actually the chemical used to manufacture bonsai, a synthetic cannabinoid. The raw material seized could have been used to create 260 tons of bonsai and, if it reached the streets, would have been distributed to potentially millions of people.

### Cocaine

A passenger traveling from Columbia was stopped by customs enforcement officials when they suspected he might be carrying narcotics. The customs officers noticed that the passenger's luggage appeared to have been modified and didn't look right. The suspect had hidden several flat

packages of white powder in the structure of the luggage, in false compartments. Upon inspection, these packages contained a white powdered substance. In a field analysis performed on the spot by the Gemini Analyzer, the white powder in the packages was identified as cocaine, 490 grams of it. The market value of the quantity of cocaine seized was determined to be approximately 2,200,000 liras (US \$400,000).



## Just Bananas?

A shipment of bananas arrived from Ecuador; a drug sniffing dog signalled that the shipping container might also be carrying narcotics. Customs Enforcement personnel of the Ministry of Trade then inspected the cargo further, and found a large number of packages containing white powder. The Gemini Analyzer quickly identified the white powdered substance as cocaine. Over 32kg of cocaine was seized, with an estimated street value of approximately 16,500,000 Turkish liras, or more than US \$3 million.

## How does it work?

The Thermo Scientific™ Gemini™ Analyzer is the world's first and only handheld integrated Raman and FTIR instrument, capable of identifying more than 15,000 individual substances in an average of 30 seconds or less. It leverages both Raman and FTIR technology to address a broader range of samples than either technique alone. Fast, safe, and accurate, it identifies unknown solids and liquids, from narcotics to explosives and chemical warfare agents to industrial chemicals and precursors using a comprehensive onboard library. The Gemini handheld analyzer minimizes time on target while delivering comprehensive and confirmatory results in a single, field-portable device.



## Conclusion

Using advanced analytical instrumentation from Thermo Fisher Scientific, BLG Chemistry Technologies is helping law enforcement in Turkey stem the flow of illegal narcotics regularly smuggled through the country's busiest airport. Thanks to the high efficiency, reliability of results, and speed of the portable Gemini Analyzer, BLG has been successful in replacing clumsy chemical detection kits with Gemini units at many ports in Turkey.

BLG works with leading technology innovators around the world, and for more than two decades has been providing BLG customers with the most advanced technology available for the advancement of life sciences, medicine, chemistry, food, agriculture, security, textile, paint, petroleum, metallurgy and mining, and more.

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