



Fact Sheet

April 2005

Laboratory and Scientific Services Directorate (LSSD) Success Stories

Created in 1898 as part of the Department of Customs, scientific and laboratory services have long played an important role in the determination of origin, authenticity and composition of goods being imported into Canada. While the type and scope of the materials it examines and the services it provides has expanded tremendously in the last 107 years, the Canada Border Services Agency's (CBSA) Laboratory and Scientific Services Directorate (LSSD) continues to be a world leader in science and engineering services among customs organizations and is recognized for its competence and expertise.

Here are a few of the LSSD's most recent success stories:

Identification of new "designer" steroid:

In December 2003, a seizure of unknown materials was made by CBSA front-line officers suspected to be an anabolic steroid. Scientists at the LSSD have characterized the chemical structure of the new illicit material and have worked very closely with their colleagues at the World Anti-Doping Agency (WADA) accredited laboratory in Montreal. Together, they confirmed the identity of the product as being Desoxy-Methyl Testosterone or DMT, announced in the media in February 2005. "This case is a textbook example of scientific collaboration between federal and private laboratories." said Dr. André Lawrence, Director General of LSSD.

RADNET:

Since the tragic events of September 11, 2001, CBSA has embarked on an ambitious program to detect and intercept radiation-containing containers imported into Canada to ensure the security of the general public and the security of Canada's supply chain. To achieve this end, LSSD has been involved in the development of fully automated, stand-alone portal systems and manually operated mobile systems for radiation detection. Both technologies will be integrated into the CBSA's Radiation Detection instrumentation NETwork (RADNET), which will link measurements from the radiation detection equipment to the National Risk Assessment Center (NRAC). RADNET will provide 24/7 alert capability, the scientific support to determine the level of hazard and will reduce the requirement for manned operations while ensuring that legitimate cargo is not impeded.

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Analytical and examination services at the front-lines:

LSSD has been instrumental in providing forensic document examination capabilities at various border points where documents and other potentially fraudulent products can be analyzed remotely by a scientist in conjunction with front-line officers. For example, a questioned document is examined using a Video Spectral Comparator (VSC), coupled with video-conferencing technology.

Development of contraband detection equipment:

In conjunction with industry, LSSD has developed field-deployable instrumentation that assists CBSA officers in the identification and interdiction of contraband materials. Ionscan® technology, based on Ion Mobility Spectrometry (IMS), was developed by LSSD and Smiths Detection (formerly known as Barringer) to detect narcotics and explosives and is the world leader in its field. It is currently deployed world-wide by law enforcement agencies. As a result of its contribution, LSSD receives royalties from sales of this technology.

Identification of counterfeit Alcohol and Tobacco (Cigars/cigarettes):

LSSD also provides a scientific expertise in the fight against tobacco and alcohol smuggling. Using chemical profiling techniques, LSSD scientists are capable of differentiating between genuine and counterfeit products. This expertise has translated into an enormous amount of tobacco and alcohol seizures across the country from illegal stills, smuggled spirits and illegal cigarette manufacturing operations.