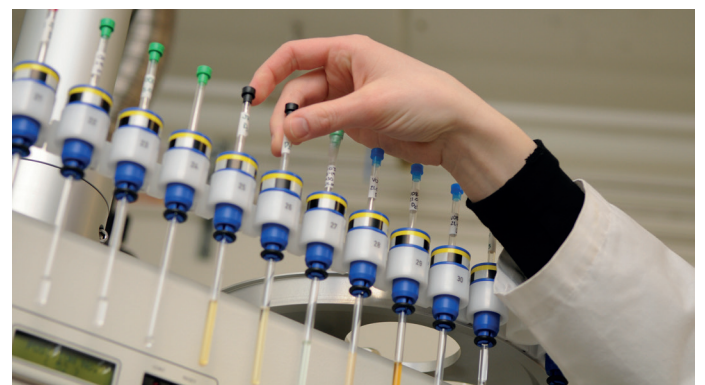




FFI - The Norwegian Research Centre on CBRNE Protection

The Norwegian Defence Research Establishment (FFI) is the national research centre on protection against chemical, biological, radiological, nuclear, and explosives threats (CBRNE).

FFI is the prime institution responsible for defence-related research in Norway and has developments in science and military technology particularly in focus. In addition, FFI assesses civil preparedness and protection measures and the society's vulnerability to a crisis event. Our objective is to enhance Norway's capability to prevent, protect, and recover from incidents involving CBRNE by providing science-based advice and support. We therefore support the Norwegian Ministry of Defence, the Armed Forces, national authorities, first responders and any stakeholder in order to be best fit to prepare for and respond to CBRNE incidents. A good example is our involvement in "Operation RECSYR (Removal of Chemical Agents from Syria)".



▲ FFI's laboratory for identification of chemical warfare agents

Our research covers all aspects of protection against CBRNE, dealing with threat and consequence assessments, vulnerability analyses, detection and identification techniques, hazard prediction and hazard management technologies, protective equipment, medical countermeasures and home-made explosives. Knowledge in these areas is contingent upon the understanding of the threat posed by CBRNE materials.

FFI possesses a unique national laboratory for identification of samples containing chemical, biological, radiological, and explosives either alone or in a mixture. Our aim is to “identify the unknown”, i.e. any agent present in a sample. The laboratory is an operational capability for the Norwegian Armed Forces and participates yearly in the OPCW Proficiency Tests with excellent results. The laboratory also supports civilian authorities and institutes, and is a member of a national laboratory network together with Norwegian Institute for Public Health and Norwegian Veterinary Institute.

FFI has a significant research activity on testing and evaluation (T&E) of CBRNE equipment, and is heavily involved in development of T&E schemes in collaboration with NATO and defence institutes from several European nations. This work is important to ensure that the end users’ requirements are fulfilled when considering purchase of such equipment.

FFI is performing research in close collaboration with international partners to explore the potential of numerical simulations to better guide CBRNE risk and hazard assessments, and to allow for safer and more efficient emergency response. The objective of the activity is to advance the current understanding of the complex physical processes taking place during releases, and to improve the accuracy of fast simulation tools used by the emergency services and authorities to deal with real-time hazardous material releases.

Using the aggregated CBRNE knowledge base FFI performs scenario-based analyses and consequence assessments which are used by military and civilian authorities as a basis for preparedness, emergency response planning, education and training.

Lastly, FFI plays an active role, including as coordinator, of several projects within NATO, EC and EDA*, addressing CBRNE challenges. These groups are important forums for exchange of information as well as for developing harmonized solutions against these challenges.

For further information, please contact:

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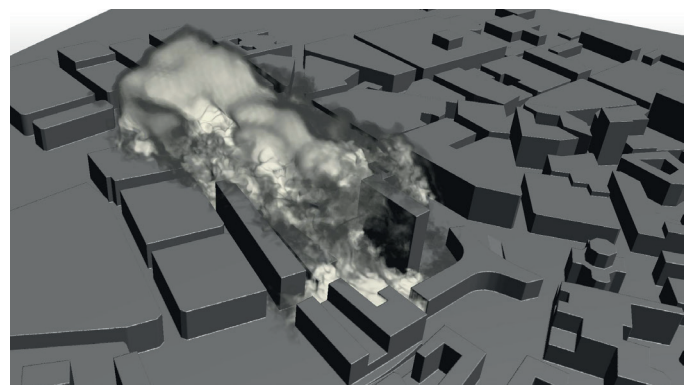
* *Examples: PRACTICE, TWOBIAAS, EDEN, SLAM, BFREE*



▲ Unknown sample



▲ Identifying unknown gas



▲ Modeling release of hazardous materials in urban environments