



PerkinElmer and Leading Japan Universities Announce Results of Collaboration to Detect Contamination from Nuclear Crisis

Global leader in detection technologies helps researchers create new tests for radiation in water, soil and food, for safety and decontamination

WALTHAM, Mass.--(BUSINESS WIRE)-- [PerkinElmer, Inc.](#) (NYSE: PKI), a global leader focused on improving the health and safety of people and the environment, today announced the results of collaborations with Fukushima University and the University of Tokyo, to develop new radiation detection tests in support of ongoing nuclear crisis response efforts in Japan.

Immediately after the March earthquake that triggered the radiation contamination event in Fukushima prefecture, PerkinElmer assembled and deployed a loan package of sophisticated radiometric detection instruments and expertise for use by front-line researchers in Japan. The company provided research teams with critical application knowledge and technology platforms including Liquid Scintillation Counters, Gamma Ray Counters, and Mass Spectrometers, for measuring uranium, plutonium, iodine, cesium and strontium isotopes in soil, water supplies, fish, vegetables and other produce in affected areas.

In response to concerns from the local community of Fukushima prefecture, Fukushima University researchers developed the first map of radioactive contamination immediately after the accident. PerkinElmer worked closely with Dr. Yoshitaka Takagai, Associate Professor of Analytical Chemistry in the Division of Environmental System Management, Faculty of Symbiotic Systems Science, Fukushima University.

According to Dr. Takagai, "Our research team took the initiative to build the first map of radioactive fallout in response to urgent local anxiety and demands for assurance, as well as taking on the additional vital task of detecting soil contamination to guide cleanup efforts. PerkinElmer technology was instrumental in speeding up the formerly labor-intensive radiation screening of large volumes of soil samples. The sensitivity of the instruments also helped in developing protocols for removing topsoil to ensure effective decontamination of public areas such as schoolyards and playgrounds."

The Radioisotope Center of University of Tokyo also participated in the urgent task of determining the scope of contamination in the affected areas, as well as devising new methods for detecting radiation in soil, water, and food, to determine their safety and to guide development of decontamination methods, using PerkinElmer equipment.

Toshiyuki Tadenuma, radiation detector group leader, PerkinElmer, commented, "PerkinElmer has also deployed these technologies in collaboration with the National Institute of Health Sciences in Japan, to create screening methods for testing radiation levels in beef products in the affected areas, which will be expanded into other food ingredients."

Robert F. Friel, chairman and chief executive officer of PerkinElmer, said, "As soon as the crisis became known, we felt a unique responsibility to offer all possible assistance, as our company has long been a leader in the specific field of radiometric detection, a technology that enables critical applications needed by the Japanese crisis monitoring and remediation teams. We quickly identified the technologies and applications that would be required, and rapidly mobilized the needed solutions and expertise to support response efforts, by offering our people and technologies to aid researchers leading contamination detection and cleanup activities."

Friel added, "Over the course of the last several months, due to the strong efforts by the PerkinElmer Japan team and their global colleagues, we are proud to have been able to assist Fukushima University and the University of Tokyo in their mission to find and reduce the effects of radiation and other contaminants resulting from the March earthquake and tsunami. We look forward to continuing our support for as long as necessary to help the people of Japan in their efforts to recover from the crisis."

Directly and indirectly, the use of PerkinElmer equipment by Japanese researchers in response to the nuclear crisis led to such discoveries as:

- Determining that uranium and plutonium contamination was extremely limited, in the vicinity of the reactors, and not widespread
- While radioactive iodine is completely gone from affected sites, the bulk of remaining contamination comprises long half-life cesium-134 and -137

- Cleaning up radioactive soil depends on varied terrain — and requires different protocols depending on variables such as abundance of site vegetation, and other related factors

Specific PerkinElmer technology platforms used by the university teams included:

- Liquid scintillation counter technology ([Tri-Carb[®]](#)) used for measurement of radioactive strontium and radioactive hydrogen (tritium), to locate contamination patterns as well as testing environmental water samples.
- Automatic gamma counter technology ([WIZARD²[®]](#)) used for 270 sample sequential measurement of gamma-ray nuclear species such as radioactive cesium and iodine, to determine the scope of contamination in the affected areas, as well as devise new methods for detecting radiation in soil, water, and food, to determine their safety as well as to guide development of decontamination methods.
- Inorganic technology ([ELAN[®] DRC II ICP-MS](#)) with the necessary broad range of detection limits required for metal contamination (as well as the presence of uranium and plutonium) in drinking water, soil, wastewater and food.

To learn more about [PerkinElmer's Japan Rapid Response efforts](#), please visit www.perkinelmer.com.

About PerkinElmer, Inc.

PerkinElmer, Inc. is a global leader focused on improving the health and safety of people and the environment. The Company reported revenue of approximately \$1.7 billion in 2010, has about 7,000 employees serving customers in more than 150 countries, and is a component of the S&P 500 Index. Additional information is available through 1-877-PKI-NYSE, or at www.perkinelmer.com.

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