

**DETERMINATION ON PLUTONIUM FROM AIR FILTERS
FOR THE DETECTION OF UNDECLARED NUCLEAR ACTIVITIES**

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In Finland analytical development is being carried out to support the IAEA Action Team which has the UN's mission to detect undeclared nuclear activities in Iraq. A research consortium Finnish Nuclear Verification (FINUVE), which combines the analytical services of the Laboratory of Radiochemistry, Technical Research Centre of Finland and the Finnish Radiation and Nuclear Safety Authority, has carried out air filter testing in Kazakhstan in the years 2000-2001. In the Laboratory of Radiochemistry weekly filters have been first wet-ashed and then Pu separated by extraction chromatography using Eichrom's UTEVA and TRU resins. Finally the plutonium activity and isotopic composition have been determined by alpha spectrometry. Development of the analytical procedures, especially the features concerning air filters, are described in this paper.