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**A NEW STUDY ON RADIONUCLIDE CONTAMINATION  
OF MATERNAL MILK IN ITALY**

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Following the Chernobyl accident the  $^{137}\text{Cs}$  and  $^{90}\text{Sr}$  concentration in maternal milk has been studied by the Physics Department in collaboration with the Environmental Health Department of the Istituto Superiore di Sanit (Italian National Institute of Health).

Two studies were conducted in 1986-1990 in Rome and in Como Lake areas and the cesium transfer factor from mothers' food intake to their milk was assessed. Regarding the  $^{90}\text{Sr}$  contamination, no discrimination between the contribution due to the radioactive fallout from the atmospheric weapon's tests in the sixties and the one due to the Chernobyl accident could be done, because no published data on maternal milk was available before 1986.

In 1996 a new research program has been set out aimed to:

- monitoring the radioactive contamination in maternal milk in some Italian areas in order to set a ground level for future possible accidents;
- comparing the  $^{137}\text{Cs}$  and  $^{90}\text{Sr}$  concentration with the one measured in the previous studies and with the one presently measured in infant foods;
- implementing a quick system to measure the radioactive strontium in milk by ionic chromatography.

In 1997 the first samples of maternal milk were collected in four areas of Italian territory, including Como, and the cesium contamination was measured; the values obtained are about some tens of mBq/kg. The strontium contamination will be measured as soon as the experimental method will be perfected. In this paper the research program and the first experimental results will be discussed.