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On the safety of stone samples exposed to Atomic-Bomb radiations in Nagasaki

We have performed residual radioactivity measurements for samples collected in Hiroshima and Nagasaki City in the area within 2km from the Atomic-bomb hypocenter during 1985-2000. The purpose of this work was to construct a dose system on neutron and gamma-ray risks for survivors conducted by United States-Japan Research Organization, The results were compiled as DS02 report (*).

Residual radioactivities such as ^{60}Co (half life=5.2y) and ^{152}Eu (13.5y) were induced in mineral samples by neutron capture reactions. Up to 1985, the radioactivity level around hypocenter area was reduced to less than natural environmental radioactivity level. If one use modern high sensitive detectors, for instance, low-background gamma-ray detectors and/or Accelerator Mass Spectrometry in cooperate with chemical elemental separation, one can find residual radioactivities as an evidence of atomic bomb.

Stone samples in San-no shrine located at 782 m from hypocenter in Nagasaki atomic bomb. Today, the stones are no difference from natural stones, therefore, they are safe and no effects to people.

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(*) "Dosimetry system 2002 Vol.1 and 2" Radiation Effects Reaserch Foundation,
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