

CONTAMINATION OF SR90

1.1. Case description

1.1.1 Description of the working area

Home of a family in a rural farm.

1.1.2 Characteristics of work

Breeding and cultivation.

1.1.2.1 Reasons for monitoring; initiating event

Following a nuclear accident a radioactive cloud invests a rural farm.

The rains cause delays in warning and evacuation of the family that is taken away only three days after the event. Ambient check reveals radioactivity on vegetables.

1.1.2.2 Actions taken

The family is immediately evacuated and the medical follow up is activated due to an extremely probable internal contamination of Sr-90.

1.2. Additional information

1.2.1.1 Chemical form

Sr-90 in an unknown chemical form.

1.2.1.2 Physical characteristics, particle size, further informations

Particle size distribution totally unknown.

1.2.1.3 Nose swab, bronchial slime or similar

Nose swab present a high asymmetry between nostrils.

1.2.1.4 Any intervention used (blocking, chelating, etc.)

Nose, hairs and skin decontamination.

1.3. Body monitoring data

1.3.1 Partial body data – Organ Counting

None available

1.3.2 Whole body data

None available

1.4. Excretion monitoring data

1.4.1 Urine and faeces activity measurements

Urine were fully collected under strictly medical observation over 24h starting at days 3 and 6.
Faeces were fully collected under strictly medical observation over 24h starting at days 6 and 13.

Type of Monitoring	Date	^{90}Sr urinary daily excretion (Bq/l)
Special	3 day after	$637,5 \pm 14\%$
Special	6 days after	$356,2 \pm 14\%$

Type of Monitoring	Date	^{90}Sr faecal daily excretion (Bq/g)
Special	6 day after	$3,7 \pm 16\%$
Special	13 days after	$0,6 \pm 16\%$

1.5. Personal Data

1.5.1 Sex

Male, 40 y old

Provide the estimate of intake/intakes and effective dose/doses E(50)