

SCHEDULE 1

METHOD OF MEASUREMENT OF IRRADIATION

PART 2

Procedures

2.—(1) Before routine irradiation of a given category of foodstuffs begins at a radiation facility, the locations of the minimum and maximum doses are determined by making dose measurements throughout the product volume. These validation measurements must be carried out a suitable number of times (e.g. 3-5) in order to make allowance for variations in product density or geometry.

(2) Measurements must be repeated whenever the product, its geometry or the irradiation conditions are changed.

(3) During the process, routine dose measurements are carried out in order to ensure that the dose limits are not exceeded. Measurements should be carried out by placing dosimeters at the positions of the maximum or minimum dose, or at a reference position. The dose at the reference position must be quantitatively linked to the maximum and minimum dose. The reference position should be located at a convenient point in or on the product, where dose variations are low.

(4) Routine dose measurements must be carried out on each batch and at regular intervals during production.

(5) In cases where flowing, non-packaged goods are irradiated, the locations of the minimum and maximum doses cannot be determined. In such a case it is preferable to use random dosimeter sampling to ascertain the values of these dose extremes.

(6) Dose measurements should be carried out by using recognised dosimetry systems, and the measurements should be traceable to primary standards.

(7) During irradiation, certain facility parameters must be controlled and continuously recorded. For radionuclide facilities the parameters include product transport speed or time spent in the radiation zone and positive indication for correct position of the source. For accelerator facilities, the parameters include product transport speed and energy level, electron current and scanner width of the facility.