



Fig. 4

7.4.7. Empty and dry the dish, pour the solution to be examined into the dish up to the mark.

7.4.8. Put the instrument upon the dish again and switch it on. Take 5 readings of the Instrument (A1 , A2 , A3 , A4 , A5) and write them down. Calculate an arithmetic mean of the readings (A_{mea}) using formula (3).

$$A_{mea} = \frac{A_{b1} + A_{b2} + A_{b3} + A_{b4} + A_{b5}}{5}, \quad (3)$$

7.4.9. Calculate the specific radioactivity (A_m) of radionuclide caesium-137 in substance (in Bq/kg);

$$A_m = K_2 (A_{mea} - A_b), \quad (4)$$

where K₂ is the scaling coefficient which equals 20 (T.3). To obtain value of specific radioactivity of radionuclide caesium-137 (in Ci/kg) the result of formula (4) should be multiplied by 2.7·10⁻¹¹ (1Bq = 2.7·10⁻¹¹ Ci).

$$A_m = K_2 (A_{mea} - A_b) 2.7 \cdot 10^{-11}, \quad (5)$$

Note. For measurements of the specific radioactivity of substances with different radionuclide composition (caesium-137 , strontium-90+yttrium-90, etc.) use corresponding scaling coefficient K₂ which are determined in research laboratories.

7.4.10. In case of counter overflow, when 4-digit numerals which exceed 9999 are displayed on the screen and are preceded by sign "+" (for example, "+ 0132" is displayed), specific radioactivity measurement should be repeated with S3 switch in the upper position