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Verification Scheme of Measuring Instruments for Air-Kerma of (10-60) kV X-Ray

(10～60)kV X射线空气比释动能计量器具

(English Translation)

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1 Scope

The verification system applicable to (10 to 60) Verification kVX ray air Shibi kinetic energy measuring instruments. It provides the (10 ~ 60) kVX ray air kerma national baseline purposes, including a full set of basic benchmark gauge Tools, metrology parameters, by means of a standard transfer air kerma values to the work program of measuring

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instruments, and to indicate its Uncertainty and verification methods.

2 baseline measurement (10 ~ 60) kVX ray air kerma by the reference measuring instruments and reference ionization chamber system (10 to 60) kVX ray radiation device components.

2.1 (10 ~ 60) kVX ray air kerma national benchmark 2.1.1 (10 ~ 60) kVX ray air kerma national benchmarks for reproduction and preservation of air kerma (Gy) of value, and by means of radiation to a standard of measuring instruments, measuring instruments work transfer unit value, to ensure National (10 ~ 60) kVX ray air kerma values of unity, the measurement range than the air kerma rate is (0.01 ~ 0.1) Gy/min.

2.1.2 (10 ~ 60) kVX ray air kerma national benchmarks for the free-air ionization chamber system, including flat Andante free-air ionization chamber and ionization charge measurement system. Ionization charge measurement system parallel plate free-air ionization the output of the charge chamber. Air kerma reference in (10 to 60) the radiation field kVX ray radiation device reproducing empty Air kerma values.

2.1.3 (10 ~ 60) kVX ray radiation device shall comply with the magnitude of reproduction and delivery requirements. By changing the current and distance methods to extend the range (0.01 ~ 0.1) Gy/min.

2.1.4 (10 ~ 60) kVX ray air kerma national benchmarks reproduce air kerma values are not extended Degree of certainty as. Urel = 0.56%, coverage factor k = 2 (if not specified, the following are the same).

2.2 (10 ~ 60) other standard device kVX ray air kerma transmission reference (10 ~ 60) kVX ray air kerma by the reference radiation device fitted with an alternative method to the standard therapeutic levels Position, the level of the standard diagnostic apparatus, protective levels of standard equipment transfer value.

3 measurement standard Standard measuring instruments and radiation dosimeter by the standard device components. Standard radiation dosimeter by normal means Alternative Working-class dosimeters transfer value.

3.1 standard therapeutic levels of X-ray apparatus

3.1.1 X-ray treatment level standard equipment by the treatment level standard dosimeters and treatment of X-ray radiation device composition.

3.1.2 treatment level standard dosimeter air kerma rate measurement range (0.01 ~ 10) Gy/min.

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