

ORNL INSTRUMENT EVALUATION SUMMARY

Siemens Electronic Personal Dosemeter Model EPD-N

Description: The Siemens Electronic Personal Dosemeter Model EPD-N (EPD-N) is a portable device designed to detect Neutron/Gamma dose rates.

Ranges Tested: N/A

Report Date: February 11, 2003

General Comments:

1. Two Siemens EPD-Ns were tested; Serial Numbers 07000585 and 07000641.
2. Tests were performed using RF intensity levels that may be adopted by the IEC in a new standard for EPDs.
3. Confidence intervals used to ascertain whether results are conclusive or inconclusive are determined using the 0.95 quantile of the student's t distribution (95% confidence interval).

RADIATION RESPONSE

Probe Surface Sensitivity: N/A.

Energy Response: Not performed

Response Linearity: Not performed

ELECTRONIC and MECHANICAL REQUIREMENTS and TESTS

Line Noise: Not performed

Power Line Variations: Not performed

Conducted Radio Frequency: Not performed

INTERFERING RESPONSES TEST RESULTS

Radio Frequency/Microwave: No susceptibilities were observed when exposed to an RF scan from 20MHz to 1GHz at 50 ± 2 volts/meter amplitude modulated with 1kHz at 80%.

No susceptibilities were observed when exposed to an RF scan from 20MHz to 1GHz at 100 ± 2

volts/meter amplitude modulated with 1kHz at 80%.

Electric Fields: Not performed.

Magnetic Fields: Not performed

Interfering Ionizing Radiations: Not performed.

ENVIRONMENTAL FACTORS

Temperature: Not performed

Temperature Shock: Not performed

Humidity: Not performed

Vibration: Not performed.