Public Health England

The guided neutron unit (GNU)
Accuracy, portability and usability

SUMMARY

PHE has developed a highly sensitive portable neutron testing device and it is now available, capable of measuring an energy range from thermal, to TeV. The GNU is intuitive to operate, combining a colour touch-screen with simple data exportation so you can manage your results with ease. The instrument has a flatter energy dependence of response too when compared to rivals of a similar mass. This means you will avoid under/overestimation, whilst maintaining hand-held portability. By ensuring you have the most accurate dose measurement not only means the safest working conditions for your staff but it also saves you operating costs and the time spent carrying out potentially unnecessary procedures. The GNU has been tested at NPL, PHE and CERN and is fully compliant, meeting the requirements of IEC 61005:2014 and ANSI N42.17A:2003.

KEY FACTS

- hand-held portability
- excellent sensitivity and data capture speed, delivering shorter exposure time for workers
- unmatched energy response measurement accuracy
- negligible response to gamma radiation
- consistent response in all orientations
- colour touchscreen control
- easily exported results
- standard connections to existing electronics in installed systems

KEY USES

- nuclear power industry
- nuclear weapon safety management
- nuclear processing and reprocessing safety management
- nuclear powered naval vessels
- counter-terrorism radiation threat assessment
- medical and research accelerators
- petroleum industry — well-logging
- construction/brownfield remediation
- agriculture/natural bio-hazards
- advanced neutron detection
- all critical radiation safety environments
- perimeter measurements
- dose mapping

AVAILABLITY

- available for purchase as a hand-held unit
- available for purchase as a plug-in to existing installed neutron detectors
- technology available for license
- available for free trial period

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Guided Neutron Unit

Detector type: SNS