

# RECENT DEVELOPMENTS IN THE CALIBRATION OF SURFACE CONTAMINATION MONITORS

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## ABSTRACT

In the UK, employers are required to monitor those workplaces in which work is conducted with ionising radiations. Suitable monitors are required to be used and must be tested and calibrated on a regular basis. Advice on the extent of tests and calibrations and performance criteria that would allow employers to comply with their statutory obligations was provided in the HSE Guidance Notes, HS(G)49, published in 1990.

For policy reasons, those Guidance Notes were withdrawn at the end of 1997 but there still existed a strong demand from the user community for prescriptive and authoritative advice. The UK Ionising Radiation Metrology Forum (IRMF), as the major representative group concerned with the calibration and testing of monitors agreed to fill this gap by producing a replacement set of guidance notes. NPL has co-ordinated the production of such a document, by IRMF members, which encompasses the best parts of HS(G)49, the results of recent research and other relevant developments. This document is now available as the "Good Practice Guide on the Examination, Testing and Calibration of Portable Radiation Protection Instruments"

The more important changes that have been introduced and the implications that these have for the monitoring community and its statutory obligations are discussed. In particular, recent developments and research in the area of surface contamination monitoring are described. The pass/fail criteria adopted in this latest guidance are not very stringent but recent work has shown that it is not particularly difficult for competent laboratories to obtain very different results. These problems will be discussed together with the precautions that need to be taken to avoid conflicts between calibration centres.

## INTRODUCTION

The Ionising Radiations Regulations of 1985 <sup>(1)</sup> govern the use of radioactive materials within the UK. It is a requirement of those regulations that all employers who undertake work with radiation monitor the workplace for surface contamination (Regulation 24). In order that the working environment can be surveyed thoroughly and in accordance with the regulations, the employer must provide sufficient equipment which is suitable for detection of the types and energies of radiation in use. The instrumentation employed for this purpose must also be examined, tested and calibrated every fourteen months to ensure that it remains fit for use.

The Health and Safety Executive (HSE) published guidance <sup>(3)</sup>, hereto referred to HS(G)49, on suitable methods to examine, test and calibrate portable radiation instruments (including surface contamination monitors) in 1990. Within this guidance,

