
Dimitrios Tsikritsis¹

Maria Cann², Christian Bortolini¹, Fiona Poda², Anton Flugge² Mark Evans² and
Natalie Belsey^{1,3}

¹National Physical laboratory, Hampton Road, Teddington, Middlesex, United Kingdom

²Veritie diagnostics, Hanborough Business Park, Oxford, United Kingdom

³University of Surrey, Guildford, United Kingdom

Dimitrios.tsikritsis@npl.co.uk

Calibration methods for Raman spectrometers in Clinical applications

In order to enable Raman to be widely deployed in clinical practice, the issue of system calibration following production and during clinical use by non-technical users must be addressed. As Raman spectroscopy continues to find new applications in diagnostics, the demand for non-complex and accessible standardisation materials and processes is growing. Despite the availability of numerous standards, there remains significant potential for further development, particularly when driven by specific applications. The lack of viable calibration approaches can be a potential barrier to obtaining regulatory approvals. In this work we have examined multiple materials that can be used for Raman spectra calibration across bench top and portable devices. Since there is a lack in the market for Standard reference materials such as the SRM2241, we propose an alternative: a polymer-based material that can serve as an intensity correction calibration sample for the fingerprint region.