

# ISO 15632:2021-02 (E)

**Microbeam analysis - Selected instrumental performance parameters for the specification and checking of energy-dispersive X-ray spectrometers (EDS) for use with a scanning electron microscope (SEM) or an electron probe microanalyser (EPMA)**

---

<b>Contents</b>	<b>Page</b>
Foreword .....	iv
Introduction .....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Requirements .....	3
4.1 General description .....	3
4.2 Energy resolution .....	4
4.3 Dead time .....	4
4.4 Peak-to-background ratio .....	4
4.5 Energy dependence of instrumental detection efficiency .....	5
5 Check of further performance parameters .....	5
5.1 General .....	5
5.2 Stability of the energy scale and resolution .....	5
5.3 Pile-up effects .....	5
5.4 Periodical check of spectrometer performance .....	5
Annex A (normative) Measurement of line widths (FWHMs) to determine the energy resolution of the spectrometer .....	6
Annex B (normative) Measurement of the L/K ratio as a measure for the energy dependence of the instrumental detection efficiency .....	11
Bibliography .....	13