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Interested committees:

Title: Draft BS ISO 23699 Microbeam analysis. Electron backscatter diffraction. Vocabulary.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 23699

Microbeam analysis — Electron backscatter diffraction — Vocabulary

ICS: 71.040.50; 01.040.71

ISO/TC 202/SC 1

Secretariat: **UNBS**

Voting begins on:
2025-04-21

Voting terminates on:
2025-07-14

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

ISO 23699 was prepared by Technical Committee ISO/TC202, *Microbeam analysis*, Subcommittee SC1, *Terminology*.

Introduction

The electron backscatter diffraction (EBSD) measurement is routinely and widely used to produce local orientation maps of a polished surface of bulk materials in the scanning electron microscopy (SEM), via the automated recording and analysis of Kikuchi diffraction patterns. It has been a modern technique used to evaluate phase distribution, grain size distribution, orientation of individual grains, disorientation inside grains and grain boundary characteristics of the crystalline materials. EBSD is applied across a wide variety of fields: in the metals process industry, the aerospace-, nuclear-, automotive- and microelectronics industry, earth sciences etc.

As a major sub-field of microbeam analysis (MBA), the EBSD technique is widely applied in diverse sectors (high-tech industries, basic industries, metallurgy and geology and medicine, environmental protection, trade, etc.) and has a wide business environment for standardization.

Standardization of terminology in a technical field is one of the basic prerequisites for development of standards on other aspects of that field.

This International Standard is relevant to the need for an EBSD vocabulary that contains consistent definitions of terms as they are used in the practice of electron backscatter diffraction by the international scientific and engineering communities that employ the technique.

This International Standard is the fourth on developed in a package of standards on electron probe microanalysis (EPMA), SEM, analytical electron microscopy (AEM), energy-dispersive X-ray spectroscopy (EDS), etc., developed or to be developed by Technical Committee ISO/TC 202, *Microbeam analysis*, Subcommittee SC 1, *Terminology*, to cover the complete field of MBA.