
Reference materials — Guidance on, and keywords used for, RM categorization

*Matériaux de référence — Conseils sur, et mots-clés pour, la
catégorisation des matériaux de référence*



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Contents		Page
Foreword.....		iv
Introduction		v
1	Scope	1
2	Abbreviated terms	1
3	Existing categorization schemes	1
4	The harmonized scheme	2
4.1	Basic principles	2
4.2	Layout	3
4.3	Recommendations	3
5	Reporting attributed keywords.....	4
6	Category keyword coding.....	5
Annex A (informative) List of keywords for RM categorization.....		6

Foreword

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In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

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ISO/TR 10989 was prepared by the ISO Committee on reference materials (REMCO).

Introduction

Reference materials (RM) are a major tool for assuring quality and reliability of results obtained in analysis and testing. Laboratories active in these fields often face problems in identifying reference materials which suit their needs. Although a large number of producers of (certified) reference materials exist, presentation of the product spectrum of each of these producers is largely heterogeneous and follows quite different principles which, in particular, causes the above problem.

It was therefore considered necessary to conduct a study into existing schemes for RM categorization with a specific view to possible harmonization approaches.

This document reports on existing categorization schemes, describes the principles and the layout of a harmonized scheme, and contains a comprehensive list of keywords recommended for RM categorization.

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1 Scope

This Technical Report covers

- a) the results of a study into, and comparison between, existing classification and categorization schemes for reference materials,
- b) the development of reference material (RM) features and characteristics upon which a harmonized and consistent categorization scheme could be based, and
- c) approaches for making the categorization scheme adaptive to new RM needs and developments.

The development of a harmonized categorization scheme aims at facilitating a transparent and comparable presentation of reference materials by producers, and the identification of reference materials by users. The intended categorization scheme was conceived to meet the needs of modern forms of information presentation and retrieval, i.e. internet-based catalogues and databases, and has been developed specifically with the view to being used this way.

2 Abbreviated terms

CCQM	Consultative Committee for Amount of Substance — Metrology in Chemistry
COMAR	International database for certified reference materials
CRM	Certified reference material
ERM®	European Reference Materials
ILAC	International Laboratory Accreditation Cooperation
IRMM	Institute for Reference Materials and Measurements
LGC	Laboratory of the Government Chemist
RM	Reference material
VIRM	Virtual Institute for Reference Materials

3 Existing categorization schemes

Eight major categorization schemes have been analysed, namely:

- the scheme as proposed by ILAC;
- the scheme applied and used by LGC Promochem (for presentation of RM in 5 field-specific catalogues: clinical, environmental, food, inorganic, physical);