SLOVENSKI STANDARD
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Dokumentacija - Izvleļ ki za objave in dokumentacijo

Documentation -- Abstracts for publications and documentation

Documentation -- Analyse pour les publications et la documentation

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INTERNATIONAL STANDARD 214

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Documentation — Analyse pour les publications et la documentation

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 214 was drawn up by Technical Committee ISO/TC 46, *Documentation*, and circulated to the Member Bodies in May 1974.

It has been approved by the Member Bodies of the following countries :

Australia	India	Spain
Austria	Iran	Sweden
Belgium	Ireland	Switzerland
Brazil	Israel	Thailand
Bulgaria	Italy	United Kingdom
Canada	Netherlands	U.S.A.
Finland	Poland	U.S.S.R.
France	Portugal	Yugoslavia
Germany	Romania	
Hungary	South Africa, Rep. of	

No Member Body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendation R 214-1961, of which it constitutes a technical revision.

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Documentation — Abstracts for publications and documentation

0 INTRODUCTION

The growing volume of scholarly, scientific, technical, and other informational and instructional documents makes it increasingly important that the basic content of each document be quickly and accurately identifiable both by readers of the primary literature and by users of secondary services. This ready identification is aided if the author of a primary document (aided by editors) begins it with a meaningful title and a well-prepared abstract.

1 SCOPE AND FIELD OF APPLICATION

This International Standard presents guidelines for the preparation and presentation of abstracts of documents. Emphasis is placed on the abstracts prepared by the authors of primary documents, and on their publication, because such abstracts can be both helpful to the readers of these documents and reproducible with little or no change in secondary publications and services. The basic guidelines are also suitable for the preparation of abstracts by persons other than the authors, so specific guidelines are also included for the presentation of abstracts in secondary publications and services.

2 DEFINITIONS

In this International Standard, the term **abstract** signifies an abbreviated, accurate representation of the contents of a document, without added interpretation or criticism[1]) and without distinction as to who wrote the abstract.[2])

An abstract should be as **informative** as is permitted by the type and style of the document; that is, it should present as much as possible of the quantitative and/or qualitative information contained in the document.[3]) Informative abstracts are especially desirable for texts describing experimental work and documents devoted to a single theme. However, some discursive or lengthy texts, such as broad overviews, review papers, and entire monographs, may permit the preparation of an abstract that is only an **indicative** or descriptive guide to the type of document, the principal subjects covered, and the way the facts are treated. A combined **informative-indicative** abstract must often be prepared when limitations on the length of the abstract or the type and style of the document make it necessary to confine informative statements to the primary elements of the document and to relegate other aspects to indicative statements. See examples 1 to 3.

Abstracts should not be confused with related, but distinct, terms : annotation, extract, and summary. An **annotation** is a brief comment or explanation about a document or its contents, or even a very brief description, usually added as a note after the bibliographic citation of the document. An **extract** is one or more portions of a document selected to represent the whole. A **summary**, if one is needed, is a brief restatement within the document (usually at the end) of its salient findings and conclusions, and is intended to complete the orientation of a reader who has studied the preceding text. (Because other portions of the document, for example purpose, methodology, are not usually condensed into this type of summary, the term should not be used synonymously with "abstract"; i.e. abstract as defined above should not be called a summary, and a summary, if used, should not duplicate — should not take on the full scope of — the abstract.)

1) A brief, critical **review** of a document often takes on much of the character of an informative or informative-indicative abstract, but its writer is expected to include suitable criticism and interpretation.

2) The word **synopsis** was formerly used to denote a résumé prepared by the author, with the term **abstract** restricted to a condensation prepared by some other person. Elimination of this distinction, which has largely disappeared, was one of the reasons for revising ISO/R 214-1961.

3) More-indicative abstracts or even annotations are less expensive to prepare, and may sometimes be all that stringencies in publication economics will permit. However, governing factors such as economics should not be confused with true standards for the quality of abstracts.

3 PURPOSE AND USE OF ABSTRACTS

3.1 Determining relevance

A well-prepared abstract enables readers to identify the basic content of a document quickly and accurately, to determine its relevance to their interests, and thus to decide whether they need to read the document in its entirety.

3.2 Obviating reading full text of fringe documents

Readers for whom the document is of fringe interest often obtain enough information from the abstract to make their reading of the whole document unnecessary.

3.3 Usefulness for computerized full-text searching

Abstracts are also of value in computerized full-text searching for alerting and information retrieval.

3.4 Use in specific primary documents

The following recommendations are for authors and editors of specific documents and publications, such as journals, reports and theses, monographs and proceedings, and patents.

3.4.1 *Journals*

Include an abstract with every journal article, essay, and discussion. Notes, short communications, editorials, and "letters to the editor" that have substantial technical or scholarly content should also have brief abstracts.

3.4.2 *Reports and theses*

Include an abstract in every separately published report, pamphlet, or thesis.

3.4.3 *Monographs and proceedings*

A single abstract may suffice in a book or monograph that deals with a homogeneous subject. However, a separate abstract is also necessary for each chapter if the volume covers different topics or is a collection of papers by different authors (for example, the proceedings of a meeting or symposium). See example 4.

3.4.4 *Patents*

Each patent or application should be accompanied by an abstract, as required by the rules of the issuing country or international agency.

3.5 Use in secondary publications and services

Secondary publications and services can often make verbatim use of the abstracts provided in primary documents if these abstracts have been carefully prepared and are free from copyright restrictions. Such authors' abstracts can also provide suitable bases for the secondary service that orients its abstracts to a group of users different from those envisaged by the authors. A completely new abstract usually needs to be written only when brief, subordinated phases of a document are all that fall within the scope of a secondary publication.

3.6 Use on documentation cards

Documentation cards can be conveniently prepared or even separated from the "abstract sheets" of journals and proceedings that include and properly present such pages of abstracts; see ISO 5122, *Documentation — Abstract sheets in serial publications*[1]. Also, when documentation cards accompany documents such as reports, these cards should preferably carry the abstracts that these documents contain.

4 TREATMENT OF DOCUMENT CONTENT

Readers in many disciplines have become accustomed to an abstract that states the purpose, methodology, results, and conclusions presented in the original document. Most documents describing experimental work can be analysed according to these elements, but their optimum sequence may depend on the audience for which the abstract is primarily intended. Readers interested in applying new knowledge may gain information more quickly from a findings-oriented arrangement in which the most important results and conclusions are placed first, followed by supporting details, other findings, and methodology. See parts A and B of example 5.

The following rules are optimum for informative abstracts. Writers of informative-indicative and indicative abstracts should follow them to the extent that is practical.

4.1 Purpose

State the primary objectives and scope of the study or the reasons why the document was written unless these are already clear from the title of the document or can be derived from the remainder of the abstract. Refer to earlier literature only if it is an essential part of the purpose.[2]

4.2 Methodology

Describe techniques or approaches only to the degree necessary for comprehension. Identify new techniques clearly, however, and describe the basic methodological principle, the range of operation, and the obtainable accuracy. For documents concerned with non-experimental work, describe data sources and data manipulation.

1) At present at the stage of draft.

2) In this event, an adequate bibliographic citation should be given within parentheses.

4.3 Results and conclusions

Results and conclusions should be clearly presented. They may be abstracted jointly to avoid redundancy, but conjecture must be differentiated from fact.

4.3.1 *Results*

Describe findings as concisely and informatively as possible. They may be experimental or theoretical results obtained, data collected, relationships and correlations noted, effects observed, etc. Make clear whether numerical values are raw or derived and whether they are the results of a single observation or of repeated measurements. When findings are too numerous for all to be included, some of the following should receive priority : new and verified events, findings of long-term value, significant discoveries, findings that contradict previous theories, or findings that the author knows are relevant to a practical problem. Limits of accuracy and reliability and ranges of validity should be indicated.

4.3.2 *Conclusions*

Describe the implications of the results and especially how these relate to the purpose of the investigation or for preparing the document. Conclusions can be associated with recommendations, evaluations, applications, suggestions, new relationships, and hypotheses accepted or rejected.

4.4 Collateral information

Include findings or information incidental to the main purpose of the document but of value outside its major subject area (for example, modifications of methods, new compounds, newly determined physical constants, and newly discovered documents or data sources). Report these clearly, but in such a way that they do not distract attention from the main theme. Do not exaggerate their relative importance in the abstracted document.

5 PRESENTATION AND STYLE

5.1 Location of the abstract

Place the abstract (at least one in the language of the original document) as early as possible in each document.

In a journal, publish the abstract prominently on the first page of each article or other abstractable item, preferably between its title and author information and the text. It is also desirable to include it on an "abstract sheet" prepared in accordance with ISO 5122, *Documentation — Abstract sheets in serial publications.*

In a separately published report, place the abstract on the title page (if possible), on the "report documentation page" (if one is included), or on a right-hand page preceding the table of contents.[1]

In a book, monograph, or thesis, place the abstract on the back of the title page or on the right-hand page following it. Place separate abstracts of chapters on or preceding their first pages.

5.2 Bibliographic information

In primary publications, include a bibliographic citation of the document on the same page as the abstract in a suitable location, for example in the running head or in the bottom margin. In secondary publications, or whenever the abstract of document is reproduced separately from it, precede or follow[2] the abstract with the bibliographic citation of the original document. Three variations of this practice are shown in example 6.

For details of citation practices see ISO 690, *Documentation — Bibliographical references — Essential and supplementary elements.*

5.3 Documentation cards

Presentation of the abstract and its bibliographic citation in a format also suitable for documentation cards is particularly desirable. The use of cardboard is preferable, both for "abstract sheets" and for documentation cards accompanying a document, but if printing is on the same paper as the rest of a publication it should be on one side only, to permit cutting out and mounting on blank cards. Maximum printing dimensions of 64 mm X 95 mm will permit use of cards sizes of either 74 mm X 105 mm (ISO A7) or 75 mm X 125 mm (the size of the international library catalogue card).

5.4 Completeness, accuracy, and length

Since an abstract must be intelligible to the reader without reference to the document, make the abstract self-contained. Retain the basic information and tone of the original document. Be as concise as possible while still fulfilling requirements as to content, but do not be cryptic or obscure. Cite background information sparingly if at all. Do not include information or claims not contained in the document itself.

For most papers and portions of monographs, an abstract of fewer than 250 words will be adequate. For notes and short communications, fewer than 100 words should suffice. Editorials and "letters to the editor" often will require only a single-sentence abstract. For long documents such as reports and theses, an abstract generally should be less than 500 words and preferably short enough to appear on a single page. The contents of the document are often more significant than its length in determining the length of the abstract required.

1) If a brief foreword is deemed necessary to supply background information in a report, the abstract should follow the foreword and should not repeat its background information.

2) In the latter case, however, the title of the document may optionally precede the abstract.

5.5 Style

Begin the abstract with a topic sentence that is a central statement of the document's major theme, unless this is already well stated in the document's title preceding the abstract. In abstracts specifically written or modified for secondary use, state the type of the document early in the abstract when this is not evident from the title or publisher of the document or will not be clear from the remainder of the abstract. Explain either the author's treatment of the subject or the nature of the document; for example, theoretical treatment, case history, state-of-the-art report, historical review, report of original research, "letter to the editor", literature survey, etc.

5.5.1 *Paragraphing; complete sentences*

Write a short abstract as a single, unified paragraph, but use more than one paragraph for long abstracts. Write the abstract in complete sentences, especially in informative abstracts, and use transitional words and phrases for coherence. A sequence of keywords for indexing (separated by punctuation) may follow the text of the abstract, however, or may be substituted for it when an indicative abstract would otherwise have been employed.

5.5.2 *Use of active verbs and personal pronouns*

Use verbs in the active voice whenever possible; they contribute to clear, brief, forceful writing. However, the passive voice may be used for indicative statements and even for informative statements in which the receiver of the action should be stressed. For example :

Say : "Iron-containing bauxites sweeten gasolines in the presence of air."

Not : "Gasolines are sweetened by iron-containing bauxites in the presence of air."

But : "The relative adsorption coefficients of ether, water, and acetylene were measured by . . ."

Use the third person unless use of the first person will avoid cumbersome sentence constructions and lead to greater clarity.

5.5.3 *Terminology*

Use significant words from the text which will help computerized text searching.

Avoid unfamiliar terms, acronyms, abbreviations or symbols, or define them the first time they occur in the abstract. Use ISO units, symbols, and terminology whenever possible, or national standards in their absence.

5.5.4 *Non-textual material*

Include short tables, equations, structural formulas, and diagrams only when necessary for brevity and clarity and when no acceptable alternative exists.

ANNEX

EXAMPLES OF ABSTRACTS*

EXAMPLE 1 — Typical informative abstracts

THE LOW-INCOME FARMER IN A CHANGING SOCIETY[1]

To identify some major differences among low-income farmers, and to delineate the group that represents the real core of the persistently poor, data were obtained from 189 farm operators representing a stratified random sample in Fayette County, Pennsylvania, in 1957. The five main categories of individuals identified were: (1) the aged, (2) the physically handicapped, (3) the farm operator primarily oriented to non-farm opportunities, (4) the farm operator oriented to commercial agriculture, and (5) the farm operator oriented to subsistence agriculture. The characteristics of the core of low-income subsistence farmers who normally do not respond to either welfare or economic-development efforts were examined in greater detail. It was found that they: (1) retained traditional values while having lost many traditional subsistence skills, (2) failed to respond to greater agricultural efficiency and productivity efforts because commercial success was not highly valued, (3) placed extreme emphasis on neighborliness and friendliness as their primary goals, and (4) must respond to an attempt to change prestige orientation if their cycle of poverty is to be broken.

STORAGE OF NATURAL GAS. FUNDAMENTALS OF A NEW METHOD[2]

A methane absorption method may be more economical for peakshaving than liquefied natural gas or dry pressurized storage. A pressure holder containing liquid propane and/or butane precooled to $-76\ ^{\circ}F$ is supplied with cooled gaseous methane from supply lines at off-peak periods. The methane is introduced at the bottom of the tank to prevent the lighter liquid (methane absorbed in propane) from affecting further absorption. During peaks, a valve is automatically opened, and the resulting pressure drop brings the methane into the supply lines via a Wobbe-number regulator. In severe peaks, liquefied natural gas can also be used. Optimum conditions for the absorption method would be for 3 to 11,4 million ft^3/storage cycle or up to 1,14 billion ft^3/season.

TUNGSTEN CARBIDE AS ANODE MATERIAL FOR FUEL CELLS[3]

Stationary potentiostatic current-voltage curves for tungsten carbide and Raney platinum electrodes of equal size in the electrochemical oxidation of 6 M formaldehyde in 3 M sulphuric acid at 70 °C showed that tungsten carbide was superior in the potential range of interest for fuel cell anodes. Current densities after 3 h were 650 mA/g of tungsten carbide using formaldehyde, 500 mA/g using hydrogen, and 160 mA/g using formic acid. Graph.

LEAD : X-RAY DIFFRACTION STUDY OF A HIGH-PRESSURE POLYMORPH[4]

An X-ray diffraction study of lead under pressure has shown that the face-centred cubic structure transforms to the hexagonal close-packed structure at room temperature and a pressure of 130 ± 10 kbar. The volume change for the transformation is $-0,18 \pm 0,06\ cm^3$/mol.

PHOSPHATE EQUILIBRIA. II. STUDIES ON THE SILVER-PHOSPHATE ELECTRODE[5]

The solubility of Ag_3PO_4 was studied at 25 °C in 3M $NaClO_4$ by using glass and Ag electrodes (to measure $[H^+]$ and $[Ag^+]$). The solubility product of Ag_3PO_4, $K_S = [Ag^+]^3\ [HPO_4^{2-}]/[H^+]$, was calculated as $\log K_S = -6,70 \pm 0,04$. The data give no evidence for another solid phosphate or for a variation in the composition of Ag_3PO_4. They are compatible with small amounts of soluble Ag phosphate complex; the best agreement, though not conclusive, is with a complex $AgHPO_4^-$, with a formation constant (from Ag^+ and HPO_4^{2-}) $\log K < 3,18$. The equilibrium is relatively rapid. The Ag_3PO_4/Ag electrode may be used to study phosphate complexing with other metal ions.

CHROMIUM AS CATALYST IN AMMONIA SYNTHESIS[6]

When a chromium catalyst prepared by the decomposition of dibenzenechromium was used in the synthesis of ammonia at 436,5 °C, the rate constants of ammonia formation for a given catalyst surface area were of the same order of magnitude as those on iron. The results confirm the hypothesis that the catalytic action of metallic iron in ammonia synthesis is due to its atomic symmetry, and that other transition metals having the same symmetry, and similar interatomic distances as the (111) face of iron should also be catalytically active. The results also confirm an ammonia synthesis mechanism in which the initial product is N_2H.

THE FILM-FORMING PROPERTIES OF EMULSIFIERS OBTAINED FROM PETROLEUM[7]

A vanadium porphyrin complex formed a film around a water droplet in benzene much more rapidly than did asphaltenes or resins, and, as with emulsifiers from five crude oils, film formation was slightly faster in formation water than in distilled water in tests involving drawing a water droplet from a benzene solution containing 0,025 % by mass of the emulsifier into a capillary tube in 1 min or 2 h or 24 h at 25 °C. The film-forming ability of the emulsifier was determined by the ratio of the droplet length at the time of necking to the initial droplet length.

EXAMPLE 2 — Typical informative-indicative abstracts

DIAGNOSING INTERDEPARTMENTAL CONFLICT[8]

Resolution of interdepartmental conflicts that decrease productivity may require structural reorganization to reduce authority-prestige ambiguity and internal social instability, and/or may require intergroup training and counseling to reduce point-of-view conflicts. A thorough study is needed of the goals and environment of the organization as a whole. Experience (cited in numerous case histories) has demonstrated that three conditions must be established to reduce these interdepartmental conflicts. Each group must have internal social stability, including common interests and promotion opportunities. Groups in close contact must share external values through common training and point of view. Authority, as indicated by work flow and control, must follow prestige lines to be legitimate.

* Except for example 6, the format in these examples is similar to that used in primary publications; i.e. the document title is centred above the text of the abstract. The bibliographic references for the documents abstracted are collected at the end of this annex; they are given in accordance with ISO 690, except that the document titles have not had to be included.