

Description

Analytical Abstracts covers all aspects of analytical chemistry in a wide variety of areas including general applications, biochemistry and clinical chemistry, industrial and applied science, environmental science, agriculture and food, pharmaceuticals and instrumentation.

Subject Coverage

Designed specifically to meet the needs of the analytical scientist, *Analytical Abstracts* provides solutions to problems in all fields of analytical chemistry, including:

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- Inorganic
- Organic
- Industrial
- Biochemical
- Pharmaceutical
- Food
- Agricultural and Environmental
- Computer Handling of Analytical Data
- Instrumentation

Date Coverage

1978 – 2021

Update Frequency

Weekly

Geographic Coverage

Global

Document Types

- Reports
- Books and Monographs
- Conferences, Symposia, Meetings
- Journal Articles

Publisher

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TI
AU,
AUFN,AULN

Possibilities of micro X-ray fluorescence spectrometry of solutions with preconcentration.

Bolotokov, A A; Gruzdeva, A. N.*; Khamizov, R K; Kumakhov, M A. **Journal of Analytical Chemistry (Translation of Zhurnal Analiticheskoi Khimii)** 69.8 (Aug 2014): 728-734.
[Pricing](#)

AB

Abstract (summary) [Translate](#)

Results of investigations in energy-dispersive X-ray fluorescence analysis aimed at the development of a high-sensitivity method of microanalysis of solutions are presented. A combined scheme of analysis of one drop of solution of the volume several microliters is proposed and tested. The scheme includes a new preconcentration method based on the drop evaporation in the presence of a micrograin of a hydrophilic adsorbent followed by the microanalysis of the solid phase on the portable device with a polycapillary lens with a focal spot of 10 μm designed at the Institute of Physical Optics. Analytically meaningful X-ray fluorescence spectra are obtained using DETATA (grain diameter about 100 μm) and SAC8 (50 μm) adsorbents and individual drops of model solutions containing Mn, Fe, Co, Ni, Cu, and Zn (0.2 mg/L and higher) and analytical characteristics of the proposed approach are demonstrated.

CC

Indexing (details) [Cite](#)

Classification H 20000: Environmental, Agriculture and Food
D1: Inorganic and Organic Analysis

AYT

Analyte

Analyte:	cobalt
Analyte CAS:	7440-48-4;
Analyte:	copper
Analyte CAS:	7440-50-8;
Analyte:	iron
Analyte CAS:	7439-89-6;
Analyte:	manganese
Analyte CAS:	7439-96-5;
Analyte:	nickel
Analyte CAS:	7440-02-0;
Analyte:	zinc
Analyte CAS:	7440-66-6

MTX

Matrix Matrix: water

TNQ

Technique Technique: extraction, solid-phase (SPE);
fluorimetry;
multielement analysis

SUBST,RN

Substance

Substance:	cobalt
CAS:	7440-48-4
Substance:	copper
CAS:	7440-50-8
Substance:	iron
CAS:	7439-89-6
Substance:	manganese
CAS:	7439-96-5

		Substance:	nickel
		CAS:	7440-02-0
		Substance:	zinc
		CAS:	7440-66-6
TI	Title	Possibilities of micro X-ray fluorescence spectrometry of solutions with preconcentration.	
AU, AUFN, AULN	Author	Bolotokov, A A ; Gruzdeva, A. N.* ; Khamizov, R K ; Kumakhov, M A	
AF	Correspondence author	Gruzdeva, A N alexgruzdeva@yandex.ru , Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences, Russia.	
LA	Language	English	
SL	Language of abstract	English	
DTYPE	Document type	Article	
PUB	Publication title	Journal of Analytical Chemistry (Translation of Zhurnal Analiticheskoi Khimii)	
VO	Volume	69	
ISS	Issue	8	
PG	Pagination	728-734	
ISSN	ISSN	1061-9348	
CODEN	CODEN	JACTE2	
PSTYPE	Publication type	Journal	
PD,YR	Publication date	Aug 2014	
AN	Source attribution	Analytical Abstracts, © Publisher specific	
	Accession number	AAN7647H10049	
	Document URL	http://search.proquest.com/professional/docview	
FAV	Copyright	The Royal Society of Chemistry	
UD	First available	2014-12-02	
	Updates	2014-12-02	
	Database	Analytical Abstracts (1978 - current)	

SEARCH FIELDS

Field Name	Field Code	Example	Description and Notes
Abstract	AB	ab("microanalysis of solutions")	Use adjacency and/or Boolean operators to narrow search results.
Abstract present	ABANY	"hydrophilic adsorbent" AND abany(yes)	Add: <i>AND ABANY(YES)</i> to a query to limit retrieval to records with abstracts.
Accession number	AN	an(AAN7647H10049)	A unique document identification number assigned by The Royal Society of Chemistry.
All fields	ALL	all(spectro*) all(spectrometric NEAR/5 detection)	Searches all fields in bibliographic files. Use adjacency and/or Boolean operators to narrow search results.
All fields + text	--	spectro* spectrometric N/5 detection	Same as ALL field code: searches all fields.
Analyte	AYT	ayt(cobalt) rn(7440-48-4) ayt(zinc LNK 7440-66-6)	AYT searches analyte, analyte description, and analyte CAS. "Analyte" is the substance being analyzed. Add: -A to a CAS Registry number to limit searching to the Analyte CAS Reg no. Elements within a field may be searched using LNK.
Author ¹ Author First Name Author Last Name	AU AUFN AULN	au("khamizov, r k") aufn(r*) auln(khamizov)	Includes all authors. Also searchable via the Look Up Citation tool.

¹ A Lookup/Browse feature is available for this field in the Advanced Search dropdown or in Browse Fields.

Field Name	Field Code	Example	Description and Notes
First author	FAU	fau("bolotokov a a")	First name listed in Author field. First author is included in Author browse, but its position cannot be specified in the Author browse.
Author affiliation	AF	af(Vernadsky Institute of Geochemistry PRE/8 russia)	Displays as Author affiliation or in Correspondence author field.
Availability	AV	av(www.ist-spe.com)	
CAS® Registry Number	RN, SUBST	rn(7439-89-6)	Also searchable using the Substance field code (SUBST).
Classification	CC, CL	cc(D1: inorganic and organic Analysis)	
CODEN	CODEN	coden(jacte2)	
Conference information	CF	cf("15th International Conference on Flow Injection Analysis")	Can contain the conference name, location and date.
Document title	TI	ti("Possibilities of micro X-ray fluorescence spectrometry")	Also searches alternate title and subtitle. Use adjacency and/or Boolean operators to narrow search results. Searching a phrase without quotes or Boolean operators, assumes an AND operation.
Title only	TIO	tio(infrared)	Searches the Title only (not the Alternate Title)
Document type	DTYPE	dtype(article)	
First available	FAV	fav(2014-12-02)	Indicates the first time a document was loaded in a specific database on PQD. It will not change regardless of how many times the record is subsequently reloaded, as long as the accession number does not change.
From database ²	FDB	ti("liquid chromatography") AND fdb(ANALYTICALABSTRACTS) ti("liquid chromatography") AND fdb(1008205)	Useful in multi-file searches to isolate records from a single file. FDB cannot be searched on its own; specify at least one search term then AND it with FDB.
ISBN	ISBN	isbn(978 92 4 158075 0)	
ISSN	ISSN	issn(1061-9348) issn(10619348)	Use of hyphens is optional. Also searchable via the Look Up Citation tool.
Issue	ISS	iss(8)	Also searchable via the Look Up Citation tool.
Journal name	JN	jn(sensors) jn("food chemistry")	Journal names only. For names of other publication types, use PUB. Also searchable via the Look Up Citation tool for Publication name.
Language	LA	la(english) la(english OR french)	The language in which the document was originally published.
Language of abstract	SL	sl(english)	
Matrix	MTX	mtx(water) mtx(olive LNK "detmn of VOC" LNK 8001-25-0) rn(8001-25-0-M)	Searches matrix, matrix description, and matrix CAS Registry Number. "Matrix" is the medium where the analyte is being analyzed. Elements within a field may be searched using LNK.

² Click the "Field codes" hyperlink at the top right of the Advanced Search page. Click "Search syntax and field codes", then click on "FDB command" to get a list of database names and codes that can be searched with FDB.

Field Name	Field Code	Example	Description and Notes
			Add: -M to a CAS Registry number to limit searching to the Matrix CAS Reg no.
Notes	NT	nt("world health organization")	
Pagination	PG	pg(728-734)	Start page is also searchable via the Look Up Citation tool.
Start page	PAGE	page(728)	Start page is also searchable via the Look Up Citation tool.
Publication date	PD	pd(201408) pd(>=20140101) pd(20130101-20130630)	Date range searching is supported.
Publication title ¹	PUB	pub("journal of analytical chemistry")	Look Up list is available. Title of publication where document originally appeared, usually a periodical title. May include alternate publication titles.
Publication year	YR	yr(2011) yr(2012-2013) yr(>=2010)	Date range searching is supported. Also searchable with PY.
Publication type	PSTYPE	pstype(journal)	
Record type	RTYPE	rtype(journal) rtype(book)	
Report number	RP	rp(IST 1016 A)	
Source information	SRC	src(journal NEAR/3 pharmaceut* AND 5)	Includes Publication title, Volume, Issue, ISSN, Publication date and Pagination. Also searchable via the Look Up Citation list.
Subject ¹	SU	su(electrodes) su("flow-injection analysis")	Searches analytes, techniques, matrix. Includes Descriptors.
Substance	SUBST	subst(manganese) subst(7439-96-5)	Includes substance name and CAS Registry Number (RN).
Technique	TNQ	tnq(fluorimetry)	Searches technique and technique description. "Technique" is the method used for analysis.
Title (document)	TI	ti("Possibilities of micro X-ray fluorescence spectrometry")	Also searches alternate title and subtitle. Use adjacency and/or Boolean operators to narrow search results.
Updated	UD	ud(2014-12-02)	The date(s) the record was loaded as a result of an update provided by the supplier.
Volume	VO	vo(69)	Also searchable via the Look Up Citation tool.

SEARCH TOOLS

Field codes are used to search document fields, as shown in the sample document. Field codes may be used in searches entered on the **Basic Search**, **Advanced Search**, and **Command Line** search pages. **Limit options**, **Look up lists**, and **"Narrow results by" filters** tools are available for searching. Some data can be searched using more than one tool.

LIMIT OPTIONS

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Abstract included

Short lists of choices are available for:

Document type, Language, Classification

Date limiters are available in which you can select single dates or ranges for **date of publication** and **updated**.

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Author, Publication Title, Subject

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When results of a search are presented, the results display is accompanied by a list of “Narrow results by” options shown on the right-hand panel. Click on any of these options and you will see a ranked list showing the most frequently occurring terms in your results. Click on the term to apply it to (“narrow”) your search results. Narrow results by filters in Analytical Abstracts include:

Author, Language, Publication title, Subject, Document type, Publication date

LOOK UP CITATION

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DOCUMENT FORMATS

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View ⁴	Description	Online	Export/ Download
Brief view result listing	Title and Publication date	✓	
Detailed view result listing	Same as Brief view plus a 3-line KWIC window	✓	
KWIC (Keyword in context)	Detailed view plus all occurrences of your search terms, highlighted within the fields where the terms occur	✓	✓
Preview	Title, Author, Publication title, Volume, Issue, Pagination, Publication date, Abstract, Subject	✓	

³ To view a more complete record, click on one of the pre-defined formats listed beneath the title in your Results list, e.g., Brief Citation, Citation/Abstract, Full Text, etc.

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Document format	Description	Online	Export/Download
Brief citation	Bibliographic record minus Abstract, Indexing and References	✓	✓
Citation/Abstract	Complete bibliographic record	✓	✓
Custom	To design your own download format, choose the “Custom” format option in the Export/Save menu, and check the fields to be downloaded.		✓ ⁶

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⁶ The Custom export/download format is available in the following mediums only: HTML, PDF, RefWorks, RTF, Text only.