

Analytical Abstracts

ONTAP® Analytical Abstracts (File 385)

FILE DESCRIPTION

Analytical Abstracts is designed specifically to meet the information needs of the analytical scientist. It provides solutions to analytical problems in a wide variety of areas, from biochemistry and clinical chemistry to industrial and applied science, from the environment, agriculture and food to pharmaceuticals. The comprehensive coverage of new techniques and applications aims to keep users at the forefront of their disciplines.

More than 100 core international journals, manufacturers' application notes, standards and books are abstracted for inclusion in **Analytical Abstracts**. Around 325 items are added at each weekly update. The coverage of the database goes back to 1980.

The unique indexing, featuring easy selection of analyte, matrix and technique, ensures efficient, targeted searching.

SUBJECT COVERAGE

All fields of analytical chemistry, including:

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

SOURCES

Items are taken from approximately 100 core journals, as well as books, technical reports, equipment manufacturers' application notes, and conference proceedings.

TIPS

USE FILE 305

to search for information on new techniques and applications in the analytical sciences.

USE THE A SUFFIX

to narrow a Descriptor or CAS® Registry Number search to a substance identified as the Analyte

S CARBON MONOXIDE-A
S RN=630-08-0A

USE THE M SUFFIX

to narrow a Descriptor or CAS® Registry Number search to a substance identified as the Matrix

S AIR-M
S RN=7727-37-9M

USE (S) OPERATOR

to link an Analyte or Matrix to a technique.

S NITROUS OXIDE-A(S)FTIR
S RN=10024-97-2A(S)FTIR
S AIR-M(S)SPECTROMETRY

DIALOG FILE DATA

Inclusive Dates: 1980 to the present (File 305)
January - June, 1987 (File 385)

Update Frequency: Closed (File 385)
Weekly (File 305)

File Size:
359,320 records as of December 2004 (File 305)
6,000 records (File 385)

CONTACT

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SAMPLE RECORD

DIALOG(R)File 305:Analytical Abstracts
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AN=, DT= 306985 AA Accession No.: 62-12-H-10421 DOC. TYPE: Journal
/TI Precision trace gas analysis by FT-IR spectroscopy. 1. Simultaneous
 analysis of carbon dioxide, methane, nitrous oxide and carbon monoxide
 in air.

AU= AUTHOR: Esler, M. B. ; Griffith, D. W. T. ; Wilson, S. R. ; Steele, L.
 P.

CS= CORPORATE SOURCE: mesler@uow.edu.au, Dept. Chem., Univ. Wollongong,
 Wollongong, NSW 2522, Australia

JN= JOURNAL: Anal. Chem., (Analytical Chemistry), Volume: 72, Issue: 1,
 Page(s): 206-215

CD= CODEN: ANCHAM ISSN: 0003-2700

PD=, PY=, LA= PUBLICATION DATE: 1 Jan 2000 (20000101) LANGUAGE: English

/AB ABSTRACT: The development of a method of trace gas analysis based on 1
 cm-1 resolution FTIR spectrometry, deployable in both laboratory and
 field applications is reported. Carbon dioxide, methane, nitrous oxide,
 and carbon monoxide may be analyzed simultaneously in a single air
 sample using this method. It is demonstrated that the method can
 provide analytical precision of the order of +/-0.15 .mu.mol/mol for
 CO2, +/-0.9 nmol/mol for CH4, +/-0.3 nmol/mol for N2O, and +/-0.3
 nmol/mol for CO, expressed as mole fractions in dry air. The analytical
 precision is in all cases competitive with or superior to that of the
 more usual methods of analysis for these trace gases, namely,
 nondispersive infra-red spectroscopy for CO2 and gas
 chromatography-based techniques for CH4, N2O, and CO. The novel FTIR
 method relies on calibration using synthetically calculated absorbance
 spectra and a chemometric multivariate calibration algorithm, classical
 least squares.

/ID IDENTIFIERS: spectrometry, absorption, infra-red, Fourier-transform (FTIR
 spectrometry)

/DE, CN=, RN= ANALYTE: carbon dioxide (124-38-9) --detmn. of, in air, by FTIR
 spectrometry
 methane (74-82-8) --detmn. of, in air, by FTIR spectrometry
 nitrous oxide (10024-97-2) --detmn. of, in air, by FTIR
 spectrometry
 carbon monoxide (630-08-0) --detmn. of, in air, by FTIR
 spectrometry

/DE, CN= MATRIX: air --detmn. of carbon dioxide, carbon monoxide, methane and
 nitrous oxide in, by FTIR spectrometry

SC=, /SH, SH= SECTION: H-10000 (Environmental, Agriculture and Food)

SEARCH OPTIONS

BASIC INDEX

| SEARCH SUFFIX | DISPLAY CODE | FIELD NAME | INDEXING | SELECT EXAMPLES |
|---------------|--------------|---|----------------|--|
| — | — | All Basic Index Fields | Word | S METHANE |
| /AB | AB | Abstract ^{1,2} | Segment & Word | S METHANE/AB S TRACE(W)GAS?/AB |
| /DE | DE | Descriptor (includes Analyte and Matrix) ^{1,3} | Segment & Word | S OXIDE/DE S CARBON(S)MONOXIDE/DE S FTIR(S)SPECTROMETRY/DE |
| /ID | ID | Identifier ^{1,4} | Segment & Word | S ABSORPTION/ID S INFRA(W)RED/ID |
| /SH | SH | Section Heading | Word | S ENVIRONMENTAL/SH |
| /TI | TI | Title ¹ | Segment & Word | S AIR/TI S TRACE(W)GAS/TI |

¹ Chemical substance names are segmented in all Basic Index fields; for example, TRINITROBENZENE is retrieved when searched as a single term or by searching the segments: TRI, NITRO, or BENZENE. To exclude the segments use the /FW suffix; e.g., S BENZENE/FW to retrieve the word set off by spaces or punctuation marks.

⁴ Includes concept heading.

² Abstracts present for records from 1984 forward.

³ Descriptors contain two fields: the Analyte field identifying the substance(s) being analyzed, and the Matrix field identifying the material(s) containing the analyte. To designate a substance or material as an Analyte or Matrix, append the search term with A or M (e.g., S RN=00630-08-0A; S CARBON MONOXIDE-A; S CARBON(W)MONOXIDE(W)A/DE).

ADDITIONAL INDEXES

| SEARCH PREFIX | DISPLAY CODE | FIELD NAME | INDEXING | SELECT EXAMPLES |
|---------------|--------------|--|----------|---|
| AN= | AN | AA Accession Number | Phrase | S AN=62-12-H-10421 |
| — | AN | DIALOG Accession Number | | |
| AU= | AU | Author | Phrase | S AU=ESLER, M. B. |
| AV= | AV | Availability | Word | S AV=(TURPIN(W)DISTRIBUTION) |
| BN= | BN | International Standard Book Number (ISBN) ² | Phrase | S BN=0-85404-594-5 |
| CD= | CD | CODEN | Phrase | S CD=ANCHAM |
| CF= | CF | Conference Title | Word | S CF=(WORKSHOP(F)TRACE(F)ELEMENT) |
| CH= | CH | Concept Heading | Phrase | S CH=SPECTROMETRY |
| CN= | CN | Chemical Substance Name | Phrase | S CN=CARBON MONOXIDE |
| CS= | CS | Corporate Source | Word | S CS=WALLONGONG |
| CT= | CT | Secondary Citation | Word | S CT=(ZH(W)KHIM) |
| DT= | DT | Document Type | Phrase | S DT=JOURNAL |
| JN= | JN | Journal Name ⁵ | Phrase | S JN=ANAL. CHEM. S JN=JOURNAL OF MASS SPECTROMETRY |
| LA= | LA | Language | Phrase | S LA=ENGLISH |
| PD= | PD | Publication Date | Phrase | S PD=20000101 |
| PU= | PU | Publisher | Word | S PU=(ROYAL(W)SOCIETY) |
| PY= | PY | Publication Year | Phrase | S PY=2000 |
| RN= | RN | CAS(R) Registry Number | Phrase | S RN=630-08-0 |
| RP= | RP | Report Number | Phrase | S RP=NASA-TM-83033 |
| RT= | RT | Report Title | Word | S RT=(BIO(W)RAD) |
| SC= | SC | Section Code ⁶ | Phrase | S SC=H S SC=H-10000 |
| SH= | SH | Section Heading ⁷ | Phrase | S SH=ENVIRONMENTAL? |
| SN= | SN | International Standard Serial Number (ISSN) | Phrase | S SN=0003-2700 S SN=00032700 |
| SO= | SO | Source Information ⁸ | Word | S SO=(ANAL(W)CHEM) |
| UD= | — | Update | Phrase | S UD=9999 |
| XR= | XR | Cross-Reference Code and Section Heading | Phrase | S XR=B S XR=INORGANIC CHEMISTRY |

⁵ From UD=199605 both abbreviated journal name and full journal name are included. Prior to UD=199605 only the abbreviated journal name is used. Journal name is also searchable as SO=.

⁸ SO= searches only the journal name, but display includes Journal Name, Pagination, Volume, Issue, Publication Date.

⁶ Includes Main and cross-reference section codes.

⁷ Includes Main and cross-reference section headings.

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SPECIAL FEATURES

For command descriptions, enter HELP LIMIT, HELP SORT, HELP RANK, HELP MAP, HELP DUP, HELP CURRENT online.

| | | |
|----------------|--|---|
| LIMIT | / -- DIALOG Accession Number /CONF -- Records containing Conference information /ENG -- English Language /NONENG -- Non-English Language /YYYY -- Publication Year | S S3/306201-999999 S S2/CONF S S5/ENG S S5/NONENG S S3/1986 |
| SORT | AU, CS, JN, PD, PY, SH, TI | SORT S12/ALL/JN PRINT S12/3/1-50/AU/PY,D |
| RANK | All phrase- and numeric-indexed fields in the Additional Indexes can be ranked. | RANK DE RANK AU S4 |
| MAP | CD, RN, SN | MAP RN TEMP S4 |
| RD, ID | Remove duplicates (RD) or identify duplicates (ID,IDO). | RD S5 |
| CURRENT | Search only the most recent year plus one (CURRENT1) to five (CURRENT5) years. | B 305 CURRENT2 |

PREDEFINED FORMAT OPTIONS

| NO. | DIALOGWEB FORMAT | RECORD CONTENT |
|-----|------------------|---|
| 1 | -- | DIALOG Accession Number |
| 2 | -- | Full Record except Abstract |
| 3 | Medium | Bibliographic Citation |
| 4 | -- | Full Record with Tagged Fields ² |
| 5 | -- | Full Record ² |
| 6 | Free | Title |
| 7 | Long | Full Record except Indexing ² |
| 8 | Short | Title and Indexing |
| 9 | Full | Full Record ² |
| K | -- | KWIC (Key Word In Context) displays a window of text; may be used alone or with other formats |

OTHER OUTPUT OPTIONS

For an explanation, enter HELP TYPE, HELP UDF, HELP TAG online.

| | | |
|-----------------------------|---|---|
| USER DEFINED FORMATS | Display codes listed in the Search Options tables can be used to customize output. | TYPE S3/AU,TI,SO/1-5 |
| TAG | Output can be displayed with tags identifying each display field. | TYPE S3/3/1-5 TAG |
| DIRECT RECORD ACCESS | If the accession number of a specific record is known, it can be used to display the record directly. | TYPE 000685/3 DISPLAY 000221/TI,SH PRINT 000827/5 |

FOR ONLINE HELP:

See HELP FIELDS 305 for searchable fields; HELP FORMAT 305 for output formats; HELP LIMIT 305 for limits; HELP RATES 305 for cost information; HELP SORT 305 for sorts.