



STN is operated in North America  
by Chemical Abstracts Service.

## STN Database Summary Sheet

**BEILSTEIN** is a major structure and factual database in organic chemistry. The organic substance records contain the critically reviewed and evaluated documents from the Beilstein Handbook of Organic Chemistry as well as data from 176 leading journals in organic chemistry covering the period from 1779 to the present.

A substance record contains the BEILSTEIN Registry Number, the CAS Registry Number, structure diagram, molecular formula etc., all of which are searchable and displayable. Also searchable and displayable in the BEILSTEIN database is information on physical and chemical data as well as pharmacological and ecological data for a specific substance.

The database is in English, except for some text fields that also contain German terms.

Titles, abstracts, and bibliographic data of the citations in BEILSTEIN, published from 1980 to the present, make the BEILSTEIN Abstracts database (BABS).

### Subject Coverage

- Chemical Data
- Electrochemical Behaviour
- Electrical and Magnetic Properties
- Identification of Substance
- Multi-Component Systems
- Optical Properties
- Pharmacological and Ecological Data
- Physical and Mechanical Properties
- Reactions
- Safety Data
- Spectroscopic Data
- State of Aggregation
- Structure and Energy Parameters
- Thermodynamic Properties
- Transport Phenomena

### Sources

- Beilstein Handbook of Organic Chemistry
- 176 Organic Chemistry Journals

### File Data

- 1779 – present
- More than 10,500,000 substance records (5/09)
- Reaction data for more than 9 million substances (5/09)
- Updated quarterly
- Automatic current-awareness searches (SDIs) are not available

### User Aids

- NUMERIGUIDE
- Online Helps (HELP DIRECTORY lists all help messages available)
- STNGUIDE
- STNnote 32: The New Beilstein File on STN - Reaction Data

### Database Producer

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**BEILSTEIN****Search and Display Field Codes**

There are no fields that allow left truncation in this file.

**Substance Identifying Information**

Search Field Name	Search Code	Search Examples	Display Codes
Basic Index (contains single words from ADSM.PA (1), ASSM.PA (1), AUN, AZE.PA (1), BSPM.PA (1), CDER (1), CN (1), COMPN (1), CPEM.PA (1), EDM.PA (1), ENEM.PA (1), HHDG.CN (1), INP (1), LLSM.PA (1), LSSM.PA (1), LVSM.PA (1), MECM.PA (1), ODM.PA (1), POT.PRO (1), RSTR.PA (1), SOLM.PA (1), TRAM.PA (1), XREF.CN (1) and all Code.KW fields, as well as the Beilstein Record Numbers in ADSM.PABRN, ASSM.PABRN, AZE.PABRN, BRN, BSPM.PABRN, CDER.BRN, COMPBRN, CPEM.PABRN, EDM.PABRN, ENEM.PABRN, FBRN, HHDG.BRN, LLSM.PABRN, LSSM.PABRN, LVSM.PABRN, MECM.PABRN, ODM.PABRN, POT.PBRN, RSTR.PABRN, SOLM.PABRN, TRAM.PABRN, and Beilstein Preferred Registry Number (BPR), and CAS Registry Numbers(RN) and molecular formulas (MF) and fragment molecular formula (FMF))	None (or /BI)	S ETHYL S C106H146O36 S 8086664	ADSM, ASSM, AUN, AZE, BPR, BRN, BSPM, CDER, CN, COMPBRN, COMPN, CPEM, EDM, ENEM, FBRN, FMF, HHDG, INP, LLSM, LSSM, ODM, POT, LVSM, MECM, RSTR.TRAM, RN, STR, SOLM, XREF, CODE (2)
Basic Index Pharmacological and Ecological Data (contains single words from all PED fields: BIO, BIOD, COEV, ECDH, ECDP, ECTD, ECTOX, EOD, EXCA, PHARM, and USC)	/BIPED	S (AQUA? TOX?)/BIPED	BIO, BIOD, COEV, ECDH, ECDP, ECTD, ECTOX, EOD, EXCA, PHARM, USC
All Keywords Beilstein Citation Beilstein Preferred Registry Number Beilstein Record Number (3) CAS Registry Number Charge (3) Chemical Name (1) Chemical Name Segment (1) Composition: Component Beilstein Record Number (3) Composition: Component Concentration Composition: Component Name Compound Type Constitution ID (3)	/AKW /BSO /BPR  /BRN /RN /CHA /CN /CNS /COMPBRN  /COMPC  /COMPN /CTYPE  /CONSID	S CHEMICAL SHIFTS/AKW S 3-01-00-00034/BSO S 106-24-1/BPR  S 1915876/BRN S 100-03-8/RN S -1<CHA S CHOLESTEROL/CN S CHOLESTERYL/CNS S 5811/COMPBRN  S 85?/COMPC  S POLYVINYLPIRROLIDONE/COMPN S ETHYLENE/CNS AND POLYMER?/CTYPE S 1003/CONSID	.KW BSO BPR  BRN RN LSF AUN (4), CN CN COMPBRN  COMPC  COMPN CTYPE  CONSID

## Substance Identifying Information (cont'd)

Search Field Name	Search Code	Search Examples	Display Codes
Data Entry Date	/DED	S 1990?/DED S 2001/07/25/DED	DED
Data Update Date	/DUPD	S 2000/10/24/DUPD	DUPD
Element Count (specific) (3)	/ELEMENT SYMBOL	S 5/CL	MF
Element Ratio	/ELR.XX	S 2/ELR.HC AND 0.5/ELR.OC	MF
Element Symbol	/ELS	S O/ELS AND SE/ELS	MF
Field Availability (5)	/FA	S ISOELECTRIC POINT/FA	FA (6)
Field Not Availability	/FNA	S ALCOHOL/CNS AND BP/FNA	Not displayed
File Segment	/FS	S L1 AND STEREO COMPOUND/FS	FS
Fragment Beilstein Record Number (3)	/FBRN	S 1073/FBRN	FBRN
Fragment Molecular Formula	/FMF	S C6H12O6/FMF	FMF, MF
Lawson Number (3)	/LN	S 22/LN	LN
Linearized Structure Formula	/LSF	S "CH2O(1+)"/LSF	LSF
Molecular Formula	/MF	S C4H9N5.H3O4P/MF	MF
Molecular Weight (3) (Formula Weight)	/MW (or /FW)	S 3000>MW	MW
Number of Atoms (3)	/ATC	S 34-36/ATC	FMF, MF
Number of Elements (3)	/ELC	S 5/C AND 5/ELC	FMF, MF
Number of Fragments (3)	/NF	S 3/NF	MF
Periodic Group	/PG	S (A3 AND A6)/PG	Not displayed
Property Hierarchy	/PH	S MASS SPECTRUM/PH	
STN Update Date (3)	/UP	S L1 AND 20020701-20020731/UP	Not displayed
Tautomer ID (3)	/TAUTID	S 1667788/TAUTID	TAUTID

(1) Contains German text.

(2) Contains all codes with keywords.

(3) Numeric search field that may be searched using numeric operators or ranges.

(4) The CN display field contains, if available, the Chemical Name (CN) and the AUTONOM Name (AUN).

(5) Use to search for all information available for each display field.

(6) DISPLAY FA shows all display field codes available for a record.

## Bibliographic Information

Search Field Name	Search Code	Search Examples	Display Codes
Author (2)	/AU	S SHARPLESS?/AU	(1)
Citation (unresolved)	/URES	S PERKIN?/URES	(1)
Document Type (2)	/DT	S PATENT/DT	Not displayed
International Standard (Document) Number (contains the CODEN) (2)	/ISN	S JACSAT/ISN	(1)
Journal Review without CODEN	/JTW	S "JOURNAL OF THE SOCIETY OF DYERS AND COLOURISTS"/JTW	(1)
Journal Title (2)	/JT	S TETRAHEDRON/JT	(1)
Language (code and text)	/LA	S JA/LA	Not displayed
Patent Assignee (2)	/PA	S BASF/PA	(1)
Patent Country	/PC	S US/PC	(1)
Patent Number (2)	/PN	S DE 670683/PN	(1)
Publication Year (2,3)	/PY	S JACSAT/ISN AND 2000/PY	(1)

(1) References are included in the field containing searched term. References may contain a connection to Beilstein Abstracts (BABS) in the form of: BABSNNNNNN. When accessing Beilstein using STN on the Web, this BABS Number is a hyperlink to that reference in BABS. Simply click the number.

(2) To restrict search to bibliographic information in substance documents, append .SUB to the search field code, e.g., /JT.SUB. To restrict search to reaction data, append .RX to the search field code, e.g., /AU.RX.

(3) Numeric search field that may be searched using numeric operators or ranges.

**BEILSTEIN****Structure Search Terms**

Terms	Search Examples
L-number of a structure built using the STRUCTURE command or uploaded from STN Express (Boolean logic allowed between the L-numbers) <b>(1)</b> L-numbers of screen sets created using the SCREEN command (Boolean logic allowed between the L-numbers) <b>(1)</b> L-numbers of structures built using the STRUCTURE command or uploaded from STN Express combined with L-numbers of screen sets created using the SCREEN command (Boolean logic allowed between the L-numbers) <b>(1)</b>	SEARCH L1 CSS FUL S L1 NOT L2 S L3 OR L4  S L1 NOT L3

**(1)** The L-number answer set from a structure search may be combined with dictionary or factual terms, e.g., S L1 AND AMINO or S L3 AND IR?/FA.

**Types of Structure Searching**

Type	Definition	Search Code	Search Examples
Substructure (default)	Search for substances that match the query. Substitution is allowed at all open positions.	SSS	SEARCH L1 SSS FUL S L2 OR L3 SSS SAM S L7 SSS RAN
Closed Substructure	Search for substances that match the query exactly. Substitution is allowed at positions opened by CONNECT.	CSS	SEARCH L1 CSS FUL S L2 OR L3 CSS S L4 NOT L5 CSS RAN
Family	Search for substances that match the query exactly. Additional components may be retrieved.	FAM	S L6 FAM FUL
Exact	Search for substances that match the query exactly.	EXA	SEA L5 EXA FUL

**Scopes of Structure Searches**

To create an L-number answer set containing candidate structures that have passed the screening step of your structure search, enter EXTEND on the search command line or enter SET EXTEND ON or SET EXTEND ON PERM at an arrow prompt (=>). For details, enter HELP SET EXTEND at an arrow prompt.

Scope	Definition	Search Code	Search Examples
Sample <b>(1)</b> (default)	Search a fixed 5% of the file.	SAM	SEARCH L3 EXA SAM S L6 NOT L7 SSS SAM
Full	Search 100% of the file.	FUL	S L5 OR L8 SSS FUL
Range	Search a user-specified portion of the file.	RAN	S L4 RAN=(5471081,) S L3 FAM RAN=(77542, 80001)
Subset Sample	Search a fixed sample of an answer set created by a search in BEILSTEIN.	SUB SAM	S L7 CSS SUB=L5 SAM
Subset Range	Search a user-specified portion of an answer set created by a search in BEILSTEIN.	SUB RAN	S L3 SUB=L2 RAN=(,72810)
Subset Full	Search 100% of an answer set created by a search in BEILSTEIN.	SUB FUL	S L8 SUB=L6 FAM FUL

**(1)** EXTEND not valid with SAMPLE.



**BEILSTEIN****Ecological Data (cont'd)**

Search Field Name	Search Code	Search Examples	Display Codes
Biodegradation Comment (1)	/FA /BIOD.COM	S BIOD/FA S (FURTHER (W) DEGRADATION (W) PRODUCT)/BIOD.COM	BIOD BIOD
Concentration Degradation Product (1)	/BIOD.C /BIOD.DP	S 1 G/L/BIOD.C S (CARBOXYLATED (W) ALIPHATIC (W) ALCOHOL)/BIOD.DP	BIOD BIOD
Degradation Product BRN (2)	/BIOD.BRN	S 8612787/BIOD.BRN	BIOD
Degradation Rate	/BIOD.D	S 28 - 36/BIOD.D	BIOD
Exposure Period	/BIOD.EX	S 8 WEEK?/BIOD.EX	BIOD
Half-life Time	/BIOD.H	S 40?/BIOD.H	BIOD
Inoculum	/BIOD.IN	S (ACTIVATED (W) SLUDGE)/BIOD.IN	BIOD
Method, Remarks	/BIOD.MR	S (SEWAGE (W) TREATMENT)/BIOD.MR	BIOD
Temperature	/BIOD.T	S 20/BIOD.T	BIOD
Type	/BIOD.TYP	S AEROBIC/BIOD.TYP	BIOD
Biological Behaviour	/FA	S BIO/FA	BIO
Accumulation Half-Life Time	/BIO.A	S 5 DAY?/BIO.A	BIO
Accumulation Rate Constant	/BIO.AR	S 0.882 PER HOUR/BIO.AR	BIO
Bioconcentration Factor (BCF)	/BIO.BC	S 0.03/BIO.BC	BIO
Biomagnification	/BIO.MAG	S 20/BIO.MAG	BIO
Biomonitoring	/BIO.MON	S LEUKOCYTES/BIO.MON	BIO
Concentration	/BIO.C	S 0.03 - 58 .MY.G/L/BIO.C	BIO
Elimination Rate Constant	/BIO.ER	S 1.1 PER DAY/BIO.ER	BIO
Elimination Half-Life Time	/BIO.H	S 28 DAY?/BIO.H	BIO
Exposure Period	/BIO.EX	S 5 DAY?/BIO.EX	BIO
Log BCF	/BIO.LOG	S CA. 0.5/BIO.LOG	BIO
Media	/BIO.ME	S FOOD/BIO.ME	BIO
Method, Remarks	/BIO.MR	S (FISH (W) BRAIN (W) ACETYLCHOLINESTERASE)/BIO.MR	BIO
Species	/BIO.SP	S (SALMO (W) SOLAR)/BIO.SP	BIO
Temperature (2,3)	/BIO.T	S 10-15/BIO.T	BIO
Concentration in Environment	/FA	S COEV/FA	COEV
Background Concentration	/COEV.BC	S (FAT (W) BASIS)/COEV.BC	COEV
Contamination Concentration	/COEV.CC	S 0 - 20.420 MG/KG DRY WT/COEV.CC	COEV
Location	/COEV.LO	S LAKE MICHIGAN/COEV.LO	COEV
Media	/COEV.ME	S TOLUENE/CN AND SOIL/COEV.ME	COEV
Method, Remarks	/COEV.MR	S (FISH? (S) CAPTURE? (S) APRIL (S)1996)/COEV.MR	COEV
Species	/COEV.SP	S FISH/COEV.SP	COEV
Ecological Mobility: Transport and Distribution	/FA	S ECTD/FA	ECTD
Media	/ECTD.ME	S WATER-AL2O3/ECTD.ME	ECTD
Method, Remarks	/ECTD.MR	S (SOLID (W) PHASE (W) EXTRACTION)/ECTD.MR	ECTD
Results	/ECTD.RE	S (SORPTION (W) ISOTHERM)/ECTD.RE	ECTD
Type	/ECTD.TYP	S ADSORPTION/ECTD.TYP	ECTD

## Ecological Data (cont'd)

Search Field Name	Search Code	Search Examples	Display Codes
Ecotoxicology	/FA	S ECTOX/FA	ECTOX
Comment (1)	/ECTOX.COM	S (FURTHER (W) METABOL?)/ECTOX.COM	ECTOX
Concentration	/ECTOX.C	S 3 - 10 .MY.G/L/ECTOX.C	ECTOX
Effect	/ECTOX.E	S ABSORPTION/ECTOX.E	ECTOX
Endpoint of Effect	/ECTOX.EP	S (GROWTH (W) INHIBITION)/ECTOX.EP	ECTOX
Exposure Period	/ECTOX.EX	S 10 DAY?/ECTOX.EX	ECTOX
Further Details	/ECTOX.FD	S TEQ/ECTOX.FD	ECTOX
Kind of Dosing	/ECTOX.KD	S SOIL/ECTOX.KD	ECTOX
Metabolite (1)	/ECTOX.META	S TNT/CN AND 4-METHYL-3,5-DINITRO-ANILINE/ECTOX.META	ECTOX
Metabolite BRN (2)	/ECTOX.BRN	S 2242347/ECTOX.BRN	ECTOX
Method, Remarks	/ECTOX.MR	S (CHOICE (W) BIOASSAY)/ECTOX.MR	ECTOX
Results	/ECTOX.RE	S (EFFECTS (2W) OVARIES)/ECTOX.RE	ECTOX
Route of Application	/ECTOX.RA	S PERORAL/ECTOX.RA	ECTOX
Sex	/ECTOX.S	S FEMALE/ECTOX.S	ECTOX
Species or Test-System	/ECTOX.SP	S (EISENIA (W) FOETIDA)/ECTOX.SP	ECTOX
Type	/ECTOX.TYP	S LC50/ECTOX.TYP	ECTOX
Value of Type	/ECTOX.V	S CA. 0.2 NKAT/MG PROTEIN/ECTOX.V	
Exposure Assessment	/FA	S EXCA/FA	EXCA
Exposure	/EXCA.HE	S (DISTRIBUTION (S) WATER)/EXCA.HE	EXCA
Sources	/EXCA.SO	S OIL/EXCA.SO	EXCA
Oxygen Demand	/FA	S EOD/FA	EOD
Concentration	/EOD.C	S 1.5 G/EOD.C	EOD
Method, Remarks	/EOD.MR	S (STANDARD (2W) METHOD?)/EOD.MR	EOD
Oxygen Demand	/EOD.D	S 290.7/EOD.D	EOD
Ratio BOD5/COD	/EOD.RAT	S 0.98/EOD.RAT	EOD
Related to	/EOD.RE	S DOC/EOD.RE	EOD
Type	/EOD.TYP	S COD/EOD.TYP	EOD
Stability in Soil	/FA	S ECS/FA	ECS
Cation Exchange Rate	/ECS.CE	S "11.45 C MOL (P + T) KG-1"/ECS.CE	ECS
Concentration	/ECS.C	S 50 MG/KG/ECS.C	ECS
Dissipation	/ECS.D	S 33/ECS.D	ECS
Dissipation Time 50	/ECS.5	S 1332/ECS.5	ECS
Dissipation Time 90	/ECS.9	S (25(W)DAY?)/ECS.9	ECS
Exposure Period	/ECS.EX	S (64(W)DAY?)/ECS.EX	ECS
Humidity	/ECS.HU	S 0.3 - 2.7 PERCENT/ECS.HU	ECS
Method, Remarks	/ECS.MR	S (SOIL (2W) HOLIDAY (W) BEACH)/ECS.MR	ECS
Microbial Biomass	/ECS.MB	S 9.8E7 CFU/G/ECS.MB	ECS
Organic Carbon	/ECS.OC	S (50 (W) PERCENT)/ECS.OC	ECS
pH-Value (2)	/ECS.PH	S 2-5/ECS.PH	ECS
Temperature (2,3)	/ECS.T	S 20>ECS.T	ECS
Type	/ECS.TYP	S (SANDY (W) LOAM)/ECS.TYP	ECS

(1) Contains German text.

(2) Numeric search field that may be searched using numeric operators or ranges.

(3) Default unit is Cel.

## Laboratory Use and Handling Data

Search Field Name	Search Code	Search Examples	Display Codes
Use of Compound	/FA	S USC/FA	USC
Comment (1)	/USC.COM	S LIGHT/USC.COM	USC
Laboratory Use and Handling (1)	/USC.LH	S (POLYMERIC (2W) SURFACTANT)/USC.LH	USC
Use Pattern	/USC.PT	S (DETECTION (2W) PENICILLIN (2W) MILK)/USC.PT	USC

(1) Contains German text.

**BEILSTEIN****Pharmacological Data**

Search Field Name	Search Code	Search Examples	Display Codes
Comment <b>(1)</b>	/PHARM.COM	S ANTIFUNGAL/PHARM.COM	PHARM
Concentration	/PHARM.C	S 10 MG/KG/PHARM.C	PHARM
Effect	/PHARM.E	S ACUTE TOXICITY ORAL/PHARM.E	PHARM
Endpoint of Effect	/PHARM.EP	S (CELL (W) DEATH)/PHARM.EP	PHARM
Exposure Period	/PHARM.EX	S YEAR/PHARM.EX	PHARM
Further Details	/PHARM.FD	S ELECTROPHYSIOLOGICAL/PHARM.FD	PHARM
Half-life Time	/PHARM.H	S "2 HOUR(S)"/PHARM.H	PHARM
Kind of Dosing	/PHARM.KD	S DAILY/PHARM.KD	PHARM
Metabolite <b>(1)</b>	/PHARM.META	S PYRENE/CN AND PYREN-1-OL/PHARM.META	PHARM
Metabolite BRN <b>(2)</b>	/PHARM.BRN	S 8407954/PHARM.BRN	PHARM
Method, Remarks	/PHARM.MR	S (IN (W) VITRO)/PHARM.MR	PHARM
Results	/PHARM.RE	S (DOSE (W) DEPENDEN? (P) CYTOTOXICITY)/PHARM.RE	PHARM
Route of Application	/PHARM.RA	S EPICUTANEOUS/PHARM.RA	PHARM
Sex	/PHARM.S	S FEMALE/PHARM.S	PHARM
Species or Test-System	/PHARM.SP	S BACTERIA/PHARM.SP	PHARM
Type	/PHARM.TYP	S BENZENE/CN AND LD50/PHARM.TYP	PHARM
Value of Type	/PHARM.V	S EC50/PHARM.TYP (P) 0.1 MG/L/PHARM.V	PHARM

**(1)** Contains German text.

**(2)** Numeric search field that may be searched using numeric operators or ranges.

**Reaction Data**

Search Field Name	Search Code	Search Examples	Display Codes
Reaction Basic Index (contains single words from RX.CAT, RX.CL, RX.COM, RX.PRO, RX.RCT, RX.RGT, RX.SRCT, RX.SUBJ, RX.TYP, as well as reaction BRNs (RX.PBRN, RX.RBRN, and RX.SRBRN)) <b>(1)</b>	/BIRX	S CONDENSATION/BIRX	RX
All Reaction BRN (includes BRNs from RX.PBRN, RX.RBRN, and RX.SRBRN) <b>(2)</b>	/RX.ABRN	S 50000/RX.ABRN	RX
Catalyst <b>(3)</b>	/RX.CAT	S SNBR2/RX.CAT	RX
Comment <b>(1,3)</b>	/RX.COM	S (CRYSTALLINE (W) SUBSTANCE)/RX.COM	RX
Field Availability Reaction	/FA.RX	S REACTION DOCUMENTS/FA.RX	Not displayed
Number of Reaction Details <b>(2)</b>	/RX.NVAR	S 2/RX.NVAR	RX
Number of Stages <b>(3)</b>	/RX.SNR	S 2/RX.SNR	RX
Other Conditions <b>(1,3)</b>	/RX.COND	S ICEWATER/RX.COND	RX
pH Value <b>(2,3)</b>	/RX.PH	S RX.PH<1	RX
Pressure <b>(2,3,4)</b>	/RX.P	S 1-25/RX.P	RX
Product <b>(1)</b>	/RX.PRO	S "CHLORPROMAZINE N+-GLUCURONIDE CHLORIDE"/RX.PRO	RX
Product BRN <b>(2)</b>	/RX.PBRN	S 4885619/RX.PBRN	RX
Prototype Reaction <b>(3)</b>	/RX.PRT	S CATALYST?/RX.PRT	RX
Reactant <b>(1)</b>	/RX.RCT	S L-PROLINE/RX.RCT	RX
Reactant BRN <b>(2)</b>	/RX.RBRN	S 5026/RX.RBRN	RX
Reaction Classification <b>(3)</b>	/RX.CL	S (CHEMICAL (W) BEHAVIOUR)/RX.CL	RX
Reaction Details Reaction ID <b>(3)</b>	/RX.RID	S 1000.2/RX.RID	RX
Reaction ID <b>(2)</b>	/RX.ID	S 5418675/RX.ID	RX
Reaction Type <b>(3)</b>	/RX.TYP	S POLYMERIZATION/RX.TYP	RX

## Reaction Data (cont'd)

Search Field Name	Search Code	Search Examples	Display Codes
Reagent (1,3)	/RX.RGT	S ACETONE/RX.RGT	RX
Solvent (3)	/RX.SOL	S CH <sub>2</sub> CL <sub>2</sub> /RX.SOL	RX
Stage Reactant (1,3)	/RX.SRCT	S MALONALDEHYDE/RX.SRCT	RX
Stage Reactant BRN (2,3)	/RX.SRBRN	S 742586/RX.SRBRN	RX
Subject Studied (3)	/RX.SUBJ	S KINETICS/RX.SUBJ	RX
Temperature (2,3,5)	/RX.T	S -100 - -10/RX.T	RX
Time (3)	/RX.TIM	S "2.0 HOUR(S)"/RX.TIM	RX
Yield (2,3,6)	/RX.YD	S 99.99/RX.YD	RX
Yield Data (3,6)	/RX.YDT	S "1 G (BRN=1864069)"/RX.YDT	RX

(1) Contains German text.

(2) Numeric search field that may be searched using numeric operators or ranges.

(3) Reaction Details are included in QRD displays only if a field from the details is a search term.

(4) Default unit is Torr.

(5) Default unit is Cel.

(6) Values given for yield in the /RX.YD and /RX.YDT are identical but the numeric yield field (/RX.YD) does not exist for all reactions.

## Super Search Fields

Enter a super search code to execute a search in one or more fields that may contain the desired information.

Super search fields facilitate crossfile and multifile searching EXPAND may not be used with super search fields.

Use EXPAND with the individual field codes instead.

Search Field Name	Search Code	Fields Searched	Search Examples	Display Codes
All Beilstein Record Numbers	/ABRN	/BRN, /COMPBRN, /FBRN, /AZE.PABRN, /CPEM.PABRN, /ENEM.PABRN, /EDM.PABRN, /BSPM.PABRN, /ADSM.PABRN, /ASSM.PABRN, /LVSM.PABRN, /LLSM.PABRN, /LSSM.PABRN, /MECM.PABRN, /TRAM.PABRN, /ODM.PABRN, /RSTR.PABRN, /HHDG.BRN, /POT.PBRN, /CDER.BRN, /PHARM.BRN, /ECTOX.BRN, /BIOD.BRN, /ECDH.BRN, /ECDP.BRN	S 1915876/ABRN	ADSM, ASSM, AZE, BIOD, BRN, BSPM, CDER, COMPBRN, CPEM, ECDH, ECDP, ECTOX, EDM, ENEM, FBRN, HHDG, LLSM, LSSM, LVSM, MECM, ODM, PHARM, POT, RSTR, SOLM, TRAM
All Journal Titles Reaction	/AJT /RX	/JT, /JTW, /URES /RX.RCT, /RX.RGT, /RX.PRO, /RX.SUBJ, /RX.SOL, /RX.CAT, /RX.TYP, /RX.PRT, /RX.SRCT	S IMMUNOCHEMISTRY/AJT S ACETIC ACID/RX	(1) RX

(1) References are included in the field containing searched term. References may contain a connection to Beilstein Abstracts (BABS) in the form of: BABSNNNNNN. When accessing Beilstein using STN on the Web, this BABS Number is a hyperlink to that reference in BABS. Simply click the number.

**BEILSTEIN****Property Search and Display Field Codes****Electrical and Magnetic Properties**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Dielectric Constant (1)	none	/DIC	S 2-2.2/DIC	DIC
Comment (2)	-	/DIC.COM	S HANDBOOK/DIC.COM	DIC
Frequency (1)	Hz	/DIC.F	S 50000/DIC.F	DIC
Temperature (1)	Cel	/DIC.T	S 20.5/DIC.T	DIC
Dielectric Static Constant (1)	none	/DICS	S 2.3-2.301/DICS	DICS
Comment (2)	-	/DICS.COM	S POLARISATION/DICS.COM	DICS
Temperature (1)	Cel	/DICS.T	S DICS.T>20	DICS
Electrical Data	-	/FA	S ELE/FA	ELE
Comment (2)	-	/ELE.COM	S PHENOL/ELE.COM	ELE
Description	-	/ELE.KW	S PIEZOELECTRICITY/ELE.KW	ELE
Magnetic Data	-	/FA	S MAG/FA	MAG
Comment (2)	-	/MAG.COM	S HANDBOOK/MAG.COM	MAG
Description	-	/MAG.KW	S MAGNETIC MOMENT/MAG.KW	MAG
Magnetic Susceptibility (1)	cm**3/mol*E6	/MSUS	S 0-410/MSUS	MSUS
Comment (2)	-	/MSUS.COM	S RANGE/MSUS.COM	MSUS
Temperature (1)	Cel	/MSUS.T	S 20-25/MSUS.T	MSUS

(1) Numeric search field that may be searched using numeric operators or ranges.

(2) Contains German text.

**Electrochemical Behaviour Properties**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Cross-Section	-	/FA	S XS/FA	XS
Comment (1)	-	/XS.COM	S ELEKTRONEN/XS.COM	XS
Description	-	/XS.KW	S COLLISION CROSS-SECTION/XS.KW	XS
Dissociation Exponent (pK) (2)	none	/DE	S 1.5-1.55/DE	DE
Comment (1)	-	/DE.COM	S HANDBOOK/DE.COM	DE
Method	-	/DE.MET	S CONDUCTOMETRIC/DE.MET	DE
Solvent	-	/DE.SOL	S D20/DE.SOL	DE
Temperature (2)	Cel	/DE.T	S DE.T>180	DE
Type	-	/DE.TYP	S THERMODYNAMIC/DE.TYP	DE
Electrochemical Behaviour	-	/FA	S ELCB/FA	ELCB
Comment (1)	-	/ELCB.COM	S GAS/ELCB.COM	ELCB
Description	-	/ELCB.KW	S PROTON AFFINITY/ELCB.KW	ELCB
Electrochemical Characteristics	-	/FA	S POT/FA	POT
Comment (1)	-	/POT.COM	S CYCLOVOLTAMMETRY/ POT.COM	POT
Description	-	/POT.KW	S OXIDATION POTENTIAL/POT.KW	POT
pH-Value (2)	none	/POT.PH	S 1-7/POT.PH	POT
Product	-	/POT.PRO	S PHENYLENEDIAMINE/ POT.PRO	POT
Product BRN (2)	none	/POT.PBRN	S 2827/POT.PBRN	POT
Solvent	-	/POT.SOL	S METHANOL/POT.SOL	POT
Temperature (2)	Cel	/POT.T	S POT.T<-10	POT
Isoelectric Point pH (2)	none	/IEP	S IEP>5.5	IEP
Comment (1)	-	/IEP.COM	S HANDBOOK/IEP.COM	IEP
Solvent	-	/IEP.SOL	S H2O/IEP.SOL	IEP

(1) Contains German text.

(2) Numeric search field that may be searched using numeric operators or ranges.

## Multi-Component Systems (MCS)

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Adsorption (MCS)	-	/FA	S ADSM/FA	ADSM
Comment (1)	-	/ADSM.COM	S HANDBOOK/ADSM.COM	ADSM
Description	-	/ADSM.KW	S ENTHALPY OF ADSORPTION/ADSM.KW	ADSM
Partner (1)	-	/ADSM.PA	S TRITON X-100/ADSM.PA	ADSM
Partner BRN (2)	none	/ADSM.PABRN	S 2343266/ADSM.PABRN	ADSM
Pressure (2)	Torr	/ADSM.P	S 0.5-20/ADSM.P	ADSM
Solvent	-	/ADSM.SOL	S H2SO4/ADSM.SOL	
Temperature (2)	Cel	/ADSM.T	S 100/ADSM.T	ADSM
Association (MCS)	-	/FA	S ASSM/FA	ASSM
Comment (1)	-	/ASSM.COM	S ACIDIC/ASSM.COM	ASSM
Description	-	/ASSM.KW	S ASSOCIATION WITH COMPOUND/ASSM.KW	ASSM
Partner (1)	-	/ASSM.PA	S IMIDAZOLE PERCHLORATE/ ASSM.PA	ASSM
Partner BRN (2)	none	/ASSM.PABRN	S 54438/ASSM.PABRN	ASSM
Pressure (2)	Torr	/ASSM.P	S 0.5-1.5/ASSM.P	ASSM
Solvent	-	/ASSM.SOL	S CDCL3/ASSM.SOL	ASSM
Temperature (2)	Cel	/ASSM.T	S ASSM.T>100	ASSM
Azeotrope (MCS)	-	/FA	S AZE/FA	AZE
Comment (1)	-	/AZE.COM	S HANDBOOK/AZE.COM	AZE
Concentrations	-	/AZE.C	S 60.11 MOL-PERCENT/AZE.C	AZE
Partner (1)	-	/AZE.PA	S DODECANE/AZE.PA	AZE
Partner BRN (2)	none	/AZE.PABRN	S 1697175/AZE.PABRN	AZE
Pressure (2)	Torr	/AZE.P	S 199.8/AZE.P	AZE
Temperature (2)	Cel	/AZE.T	S 20-25/AZE.T	AZE
Boundary Surface Phenomena	-	/FA	S BSPM/FA	BSPM
Comment (1)	-	/BSPM.COM	S HANDBOOK/BSPM.COM	BSPM
Description	-	/BSPM.KW	S SURFACE TENSION/BSPM.KW	BSPM
Partner (1)	-	/BSPM.PA	S METHANOL/BSPM.PA	BSPM
Partner BRN (2)	none	/BSPM.PABRN	S 1098229/BSPM.PABRN	BSPM
Pressure (2)	Torr	/BSPM.P	S 0-750060/BSPM.P	BSPM
Solvent	-	/BSPM.SOL	S H2O/BSPM.SOL	BSPM
Temperature (2)	Cel	/BSPM.T	S 100/BSPM.T	BSPM
Complex Phase Equilibria	-	/FA	S CPEM/FA	CPEM
Comment (1)	-	/CPEM.COM	S DEPENDENCE/CPEM.COM	CPEM
Description	-	/CPEM.KW	S PHASE EQUILIBRIUM/CPEM.KW	CPEM
Partner (1)	-	/CPEM.PA	S (NAPHTHALENE AND WATER)/CPEM.PA	CPEM
Partner BRN (2)	none	/CPEM.PABRN	S 1421310/CPEM.PABRN	CPEM
Pressure (2)	Torr	/CPEM.P	S 30000-40000/CPEM.P	CPEM
Solvent	-	/CPEM.SOL	S H2O/CPEM.SOL	CPEM
Temperature (2)	Cel	/CPEM.T	S 20/CPEM.T	CPEM
Critical Micelle Concentration (2)	g/L	/CMC	S 0.025/CMC	CMC
Comment (1)	-	/CMC.COM	S HANDBOOK/CMC.COM	CMC
Solvent	-	/CMC.SOL	S H2O/CMC.SOL	CMC
Temperature (2)	Cel	/CMC.T	S 0.025/CMC AND 40/CMC.T	CMC
Electrical Data	-	/FA	S EDM/FA	EDM
Comment (1)	-	/EDM.COM	S CONCENTRATION/EDM.COM	EDM
Description	-	/EDM.KW	S DIELECTRIC CONSTANT/ EDM.KW	EDM
Partner (1)	-	/EDM.PA	S TETRATRIACONTAN-1-OL/ EDM.PA	EDM
Partner BRN (2)	none	/EDM.PABRN	S 1798829/EDM.PABRN	EDM
Temperature (2)	Cel	/EDM.T	S 20-30/EDM.T	EDM

**BEILSTEIN****Multi-Component Systems (MCS) (cont'd)**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Energy Data (MCS)	-	/FA	S ENEM/FA	ENEM
Comment (1)	-	/ENEM.COM	S CYCLOHEXANON/ENEM.COM	ENEM
Description	-	/ENEM.KW	S ENTHALPY OF SOLUTION/ ENEM.KW	ENEM
Partner (1)	-	/ENEM.PA	S 1,4-DIOXANE/ENEM.PA	ENEM
Partner BRN (2)	none	/ENEM.PABRN	S 969148/ENEM.PABRN	ENEM
Pressure (2)	Torr	/ENEM.P	S 2-20/ENEM.P	ENEM
Solvent	-	/ENEM.SOL	S TOLUENE/ENEM.SOL	ENEM
Temperature (2)	Cel	/ENEM.T	S 25-30/ENEM.T	ENEM
Henry Constant (MCS) (2)	PA*M**3 /MOL	/HNC	S 20-30/HNC	HNC
Comment (1)	-	/HNC.COM	S CONSTANT/HNC.COM	HNC
log Henry Constant (2)	none	/HNC.LOG	S -5.72/HNC.LOG	HNC
Solvent	-	/HNC.SOL	S H2O/HNC.SOL	HNC
Temperature (2)	Cel	/HNC.T	S 25/HNC.T	HNC
Liquid/Liquid System (MCS)	-	/FA	S LLSM/FA	LLSM
Comment (1)	-	/LLSM.COM	S HANDBOOK/LLSM.COM	LLSM
Description	-	/LLSM.KW	S LIQUID/LIQUID PHASE DIAGRAM/LLSM.KW	LLSM
Partner (1)	-	/LLSM.PA	S TETRACHLOROMETHANE/ LLSM.PA	LLSM
Partner BRN (2)	none	/LLSM.PABRN	S 1098295/LLSM.PABRN	LLSM
Pressure (2)	Torr	/LLSM.P	S 0-10000/LLSM.P	LLSM
Solvent	-	/LLSM.SOL	S DIMETHYLSULFOXIDE/LLSM.SOL	LLSM
Temperature (2)	Cel	/LLSM.T	S 5-10/LLSM.T	LLSM
Liquid/Solid System (MCS)	-	/FA	S LSSM/FA	LSSM
Comment (1)	-	/LSSM.COM	S HANDBOOK/LSSM.COM	LSSM
Description	-	/LSSM.KW	S PHASE TRANSITION TEMPERATURE?/LSSM.KW	LSSM
Partner (1)	-	/LSSM.PA	S STRYCHNIDIN-10-ONE/LSSM.PA	LSSM
Partner BRN (2)	none	/LSSM.PABRN	S 52979/LSSM.PABRN	LSSM
Pressure (2)	Torr	/LSSM.P	S 0-20000/LSSM.P	LSSM
Solvent	-	/LSSM.SOL	S NAPHTHALENE/LSSM.SOL	LSSM
Temperature (2)	Cel	/LSSM.T	S LSSM.T>200	LSSM
Liquid/Vapour System (MCS)	-	/FA	S LVSM/FA	LVSM
Comment (1)	-	/LVSM.COM	S HANDBOOK/LVSM.COM	LVSM
Description	-	/LVSM.KW	S CRITICAL VOLUME/LVSM.KW	LVSM
Partner (1)	-	/LVSM.PA	S ACETALDEHYDE/LVSM.PA	LVSM
Partner BRN (2)	none	/LVSM.PABRN	S 506007/LVSM.PABRN	LVSM
Pressure (2)	Torr	/LVSM.P	S 19000-90000/LVSM.P	LVSM
Solvent	-	/LVSM.SOL	S PROPAN-1-OL/LVSM.SOL	LVSM
Temperature (2)	Cel	/LVSM.T	S 120/LVSM.T	LVSM
Mechanical & Physical Property (MCS)	-	/FA	S MECM/FA	MECM
Comment (1)	-	/MECM.COM	S DIAGRAM/MECM.COM	MECM
Description	-	/MECM.KW	S ISOTHERMAL COMPRESS?/MECM.KW	MECM
Partner (1)	-	/MECM.PA	S OCTAN-1-OL/MECM.PA	MECM
Partner BRN (2)	none	/MECM.PABRN	S 1697461/MECM.PABRN	MECM
Pressure (2)	Torr	/MECM.P	S 1-10/MECM.P	MECM
Solvent	-	/MECM.SOL	S HCL/MECM.SOL	MECM
Temperature (2)	Cel	/MECM.T	S 25-65/MECM.T	MECM
Optical Data (MCS)	-	/FA	S ODM/FA	ODM
Description	-	/ODM.KW	S KERR CONSTANT/ODM.KW	ODM
Partner (1)	-	/ODM.PA	S PHENOL/ODM.PA	ODM
Partner BRN (2)	none	/ODM.PABRN	S 969616/ODM.PABRN	ODM

## Multi-Component Systems (MCS) (cont'd)

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Partition octan-1-ol/water (MCS) (2)	none	/POW	S 1.5-2/POW	POW
log POW (2)	none	/POW.LOG	S -0.9- -0.7/POW.LOG	POW
Temperature (2)	Cel	/POW.T	S 20/POW.T	POW
Solubility (MCS) (2)	g/L	/SLB	S SLB<0.0001	SLB
Comment (1)	-	/SLB.COM	S PH/SLB.COM	SLB
Ratio of Solvents	-	/SLB.RAT	S (6 (P) 1)/SLB.RAT	SLB
Saturation	-	/SLB.SAT	S IN PURE SOLVENT/SLB.SAT	SLB
Solvent	-	/SLB.SOL	S DIETHYL ETHER/SLB.SOL	SLB
Temperature (2)	Cel	/SLB.T	S 10/SLB.T	SLB
Solubility Product (MCS) (2)	none	/SLBP	S SLBP<0.00002	SLBP
Comment (1)	-	/SLBP.COM	S HANDBOOK/SLBP.COM	SLBP
Ratio of Solvents	-	/SLBP.RAT	S (30 (P) PERCENT)/SLBP.RAT	SLBP
Solvent	-	/SLBP.SOL	S H2O/SLBP.SOL	SLBP
Temperature (2)	Cel	/SLBP.T	S 25/SLBP.T	SLBP
Solution Behaviour (MCS)	-	/FA	S SOLM/FA	SOLM
Comment (1)	-	/SOLM.COM	S PRESSURE/SOLM.COM	SOLM
Description	-	/SOLM.KW	S MISCIBILITY/SOLM.KW	SOLM
Partner (1)	-	/SOLM.PA	S XYLITOL/SOLM.PA	SOLM
Partner BRN (2)	none	/SOLM.PABRN	S 2049713/SOLM.PABRN	SOLM
Pressure (2)	Torr	/SOLM.P	S 780-850/SOLM.P	SOLM
Solvent	-	/SOLM.SOL	S TETRAHYDROFURAN/SOLM.SOL	SOLM
Temperature (2)	Cel	/SOLM.T	S 20/SOLM.T	SOLM
Transport Phenomena (MCS)	-	/FA	S TRAM/FA	TRAM
Comment (1)	-	/TRAM.COM	S HANDBOOK/TRAM.COM	TRAM
Description	-	/TRAM.KW	S DYNAMIC VISCOSITY/TRAM.KW	TRAM
Partner (1)	-	/TRAM.PA	S ETHANOL/TRAM.PA	TRAM
Partner BRN (2)	none	/TRAM.PABRN	S 1718733/TRAM.PABRN	TRAM
Pressure (2)	Torr	/TRAM.P	S 0-800000/TRAM.P	TRAM
Solvent	-	/TRAM.SOL	S PYRIDINE/TRAM.SOL	TRAM
Temperature (2)	Cel	/TRAM.T	S 9.9/TRAM.T	TRAM

(1) Contains German text.

(2) Numeric search field that may be searched using numeric operators or ranges.

## Optical Properties

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Circular Dichroism	-	/FA	S CDIC/FA	CDIC
Comment (1)	-	/CDIC.COM	S HANDBOOK/CDIC.COM	CDIC
Solvent	-	/CDIC.SOL	S CHCL3/CDIC.SOL	CDIC
Mutarotation (2)	deg	/MUT	S 10-20/MUT	MUT
Comment (1)	-	/MUT.COM	S HANDBOOK/MUT.COM	MUT
Concentration	-	/MUT.C	S 0.7 G/100ML/MUT.C	MUT
Length of Path (2)	cm	/MUT.LEN	S MUT.LEN>10	MUT
Solvent	-	/MUT.SOL	S H2O/MUT.SOL	MUT
Temperature (2)	Cel	/MUT.T	S 21/MUT.T	MUT
Time	-	/MUT.TIM	S 1 DAY?/MUT.TIM	MUT
Type	-	/MUT.TYP	S M/MUT.TYP	MUT
Wavelength (2)	nm	/MUT.W	S 589/MUT.W	MUT
Optical Rotatory Dispersion	-	/FA	S ORD/FA	ORD
Comment (1)	-	/ORD.COM	S CYCLOHEXANOL/ORD.COM	ORD
Solvent	-	/ORD.SOL	S ETHANOL/ORD.SOL	ORD

**BEILSTEIN****Optical Properties (cont'd)**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Optical Rotatory Power (2)	deg	/ORP	S 39.65-40/ORP	ORP
Comment (1)	-	/ORP.COM	S ACETAMIDE/ORP.COM	ORP
Concentration	-	/ORP.C	S 1 MOL/L/ORP.C	ORP
Length of Path (2)	cm	/ORP.LEN	S 10/ORP.LEN	ORP
Solvent	-	/ORP.SOL	S BENZENE/ORP.SOL	ORP
Temperature (2)	Cel	/ORP.T	S 20/ORP.T	ORP
Type	-	/ORP.TYP	S ALPHA/ORP.TYP	ORP
Wavelength (2)	nm	/ORP.W	S 578/ORP.W	ORP
Optics	-	/FA	S OPT/FA	OPT
Comment (1)	-	/OPT.COM	S ACETON/OPT.COM	OPT
Description	-	/OPT.KW	S LINEAR DICHROISM/OPT.KW	OPT
Refractive Index (2)	none	/RI	S 1.00056/RI	RI
Comment (1)	-	/RI.COM	S HANDBOOK/RI.COM	RI
Temperature (2)	Cel	/RI.T	S 0/RI.T	RI
Wavelength (2)	nm	/RI.W	S 586/RI.W	RI

(1) Contains German text.

(2) Numeric search field that may be searched using numeric operators or ranges.

**Physical and Mechanical Properties**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Acoustic Property	-	/FA	S SOUND/FA	SOUND
Comment (1)	-	/SOUND.COM	S HANDBOOK/SOUND.COM	SOUND
Description	-	/SOUND.KW	S VELOCITY OF SOUND/SOUND.KW	SOUND
Compressibility	-	/FA	S CMP/FA	CMP
Comment (1)	-	/CMP.COM	S HANDBOOK/CMP.COM	CMP
Description	-	/CMP.KW	S ADIABATIC COMPRESSIBILITY/ CMP.KW	CMP
Further Information (2) (Physical and Chemical Properties)	-	/FA	S FINFO/FA	FINFO
Liquid Density (3)	g*cm**3	/DEN	S 1/DEN	DEN
Comment (1)	-	/DEN.COM	S ALCOHOL/DEN.COM	DEN
Measurement Temperature (3)	Cel	/DEN.T	S 20/DEN.T	DEN
Reference Temperature (3)	Cel	/DEN.RT	S 10/DEN.RT	DEN
Mechanical Property	-	/FA	S MEC/FA	MEC
Comment (1)	-	/MEC.COM	S HANDBOOK/MEC.COM	MEC
Description	-	/MEC.KW	S VISCOSITY/MEC.KW	MEC
Surface Tension (3)	g/s**2	/ST	S 1.9-2/ST	ST
Comment (1)	-	/ST.COM	S HANDBOOK/ST.COM	ST
Temperature (3)	Cel	/ST.T	S 20-22/ST.T	ST

(1) Contains German text.

(2) Field contains citations concerning physical and chemical properties not covered in detail in BEILSTEIN.

(3) Numeric search field that may be searched using numeric operators or ranges.

## Safety Data

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Flash Point Temperature (1) Type of Test	- Cel -	/FA /FP.T /FP.TYP	S FP/FA S 105/FP.T S DIN/FP.TYP	FP FP FP

(1) Numeric search field that may be searched using numeric operators or ranges.

## Spectroscopic Data

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
ESR Data Comment (1)	- -	/FA /ESR.COM	S ESR/FA S (INORGANIC (P) COMPOUNDS)/ESR.COM	ESR ESR
Coupling Nuclei Description Solvents Temperature (2)	- - - Cel	/ESR.NUI /ESR.KW /ESR.SOL /ESR.T	S 2D/ESR.NUI S SPECTRUM/ESR.KW S CH2CL2/ESR.SOL S 19-20/ESR.T	ESR ESR ESR ESR
Fluorescence Comment (1) Description Solvent Temperature (2)	- - - Cel	/FA /FLU.COM /FLU.KW /FLU.SOL /FLU.T	S FLU/FA S HANDBOOK/FLU.COM S MAXIMA/FLU.KW S ACETONITRILE/FLU.SOL S 25/FLU.T	FLU FLU FLU FLU FLU
Infrared Spectrum Comment (1) Description  Solvent Temperature (2)	- - - - Cel	/FA /IR.COM /IR.KW  /IR.SOL /IR.T	S IR/FA S PH/IR.COM S FINE STRUCTURE OF IR BANDS/IR.KW S CHCL3/IR.SOL S IR.T>50	IR IR IR  IR IR
Luminescence Comment (1)  Description	- - -	/FA /LUM.COM  /LUM.KW	S LUM/FA S (TEMPERATURE (P) DEPENDEN?)/LUM.COM S LUMINESCENCE QUENCHING/LUM.KW	LUM LUM  LUM
Mass Spectrum Comment (1) Description	- - -	/FA /MS.COM /MS.KW	S MS/FA S METASTABLE/MS.COM S FRAGMENTATION PATTERN/MS.KW	MS MS MS
Nuclear Magnetic Resonance Comment (1)  Coupling Nuclei Description Frequency (2) Nucleus Solvents Temperature (2)	- - - - - - Cel	/FA /NMR.COM  /NMR.NUI /NMR.KW /NMR.F /NMR.NUC /NMR.SOL /NMR.T	S NMR/FA S (AMBIENT (P) TEMPERATURE)/NMR.COM S (1H and 13C)/NMR.NUI S 2D-NMR/NMR.KW S 50/NMR.F S 31P/NMR.NUC S CDCL3/NMR.SOL S 20-22/NMR.T	NMR NMR  NMR NMR NMR NMR NMR
Nuclear Quadrupole Resonance Comment (1)  Description  Nucleus	- - - - -	/FA /NQR.COM  /NQR.KW  /NQR.NUC	S NQR/FA S (NQR (P) ABSORPTION)/ NQR.COM S NUCLEAR QUADRUPOLE RESONANCE/NQR.KW S 35CL/NQR.NUC	NQR NQR  NQR  NQR

**BEILSTEIN****Spectroscopic Data (cont'd)**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Other Spectroscopic Methods Comment (1) Description	- - -	/FA /OSM.COM /OSM.KW	S OSM/FA S SHIFTS/OSM.COM S PHOTOELECTRON SPECTRUM/ OSM.KW	OSM OSM OSM
Phosphorescence Comment (1) Description	- - -	/FA /PHO.COM /PHO.KW	S PHO/FA S HANDBOOK/PHO.COM S TRIPLET STATE LIFETIME/ PHO.KW	PHO PHO PHO
Solvent Temperature (2)	- Cel	/PHO.SOL /PHO.T	S ETHANOL/PHO.SOL S 25/PHO.T	PHO PHO
Raman Spectrum Comment (1)	- -	/FA /RAS.COM	S RAS/FA S (GASEOUS (P) MATRIX)/ RAS.COM	RAS RAS
Description Solvent	- -	/RAS.KW /RAS.SOL	S RAMAN INTENSITIES/RAS.KW S KBR/RAS.SOL	RAS RAS
Rotational Spectrum Comment (1)	- -	/FA /ROT.COM	S ROT/FA S ROTATIONS DISPERSION/ ROT.COM	ROT ROT
Description	-	/ROT.KW	S ROTATIONAL SPECTRUM/ ROT.KW	ROT
UV and Visible Spectrum	-	/FA	S UVS/FA	UVS
Absorption Maxima (2) Comment (1)	nm - -	/UVS.AM /UVS.COM	S 139-139.1/UVS.AM S (ACIDIC (P) SOLUTION)/UVS.COM	UVS UVS
Description	-	/UVS.KW	S ABSORPTION MAXIMA/UVS.KW	UVS
Ext./Abs. Coef. (2) Solvent	1/MOL*CM -	/UVS.EAC /UVS.SOL	S 4.4/UVS.EAC S CYCLOHEXANE/UVS.SOL	UVS UVS

(1) Contains German text.

(2) Numeric search field that may be searched using numeric operators or ranges.

**State of Aggregation - Crystals**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Crystal Density (1) Comment (2)	g/cm**3 -	/CDEN /CDEN.COM	S 5-5.1/CDEN S ORTHORHOMBISCH?/ CDEN.COM	CDEN CDEN
Temperature (1)	Cel	/CDEN.T	S 293 K/CDEN.T	CDEN
Crystal Phase Comment (2) Description	- - -	/FA /CRYPH.COM /CRYPH.KW	S CRYPH/FA S ANISOTROPIC/CRYPH.COM S CRYSTAL STRUCTURE?/ CRYPH.KW	CRYPH CRYPH CRYPH
Temperature (1)	Cel	/CRYPH.T	S 14.85/CRYPH.T	CRYPH
Crystal Property Description: Colour + Other Properties (2) Comment (2)	- - -	/CPD /CPD.COM	S GLAS?/CPD S HANDBOOK/CPD.COM	CPD CPD

## State of Aggregation - Crystals (cont'd)

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Crystal Space Group	-	/CSG	S P212121/CSG	CSG
Comment (2)	-	/CSG.COM	S HANDBOOK/CSG.COM	CSG
Crystal System	-	/CSYS	S MONOCLINIC/CSYS	CSYS
Comment (2)	-	/CSYS.COM	S (LABILE (P) FORM)/CSYS.COM	CSYS
Crystal Transition Point (1)	Cel	/CTP	S 100.05-100.1/CTP	CTP
Change of Modification	-	/CTP.CM	S GLASS/CTP.CM	CTP
Comment (2)	-	/CTP.COM	S HANDBOOK/CTP.COM	CTP
Decomposition Point (1)	Cel	/DP	S 0-10/DP	DP
Comment (2)	-	/DP.COM	S CRYSTALLIZATION/DP.COM	DP
Solvent	-	/DP.SOL	S PROPAN-2-OL/DP.SOL	DP
Melting Point (1)	Cel	/MP	S 250-260/MP	MP
Comment (2)	-	/MP.COM	S DECOMPOSITION/MP.COM	MP
Solvent	-	/MP.SOL	S XYLENE/MP.SOL	MP
Sublimation Point (1)	Cel	/SP	S SP>=500	SP
Comment (2)	-	/SP.COM	S (MELTING (P) FORM)/SP.COM	SP
Pressure (1)	Torr	/SP.P	S 1/SP.P	SP
Triple Point (1)	Cel	/TP	S 218.85/TP	TP
Comment (2)	-	/TP.COM	S BAR/TP.COM	TP

## State of Aggregation - Liquids

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Boiling Point (1)	Cel	/BP	S BP> 200	BP
Comment (2)	-	/BP.COM	S BADTEMPERATUR/BP.COM	BP
Pressure (1)	Torr	/BP.P	S 1/BP.P	BP
Liquid Phase	-	/FA	S LIQPH/FA	LIQPH
Comment (2)	-	/LIQPH.COM	S AETHANOL/LIQPH.COM	LIQPH
Description	-	/LIQPH.KW	S SELF-ASSOCIATION IN SOLUTION/LIQPH.KW	LIQPH
Transition Point of Liquid Modification (1)	Cel	/LPTP	S 20/LPTP	LPTP
Change of Modification	-	/LPTP.CM	S (NEMATIC (P) ISOTROPIC)/LPTP.CM	LPTP
Comment (2)	-	/LPTP.COM	S HANDBOOK/LPTP.COM	LPTP

**BEILSTEIN****State of Aggregation - Gases**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Critical Density (1) Comment (2)	g/cm**3 -	/CRD /CRD.COM	S 0.2-0.2022/CRD S HANDBOOK/CRD.COM	CRD CRD
Critical Pressure (1) Comment (2)	Torr -	/CRP /CRP.COM	S CRP >760 MBAR S HANDBOOK/CRP.COM	CRP CRP
Critical Temperature (1) Comment (2)	Cel -	/CRT /CRT.COM	S 500-600/CRT S HANDBOOK/CRT.COM	CRT CRT
Critical Volume (1) Comment (2)	cm**3/mol -	/CRV /CRV.COM	S 210/CRV S HANDBOOK/CRV.COM	CRV CRV
Gas Phase Comment (2)	- -	/FA /GP.COM	S GP/FA S (SATURATED (P) LIQ?)/ GP.COM	GP GP
Description		/GP.KW	S FUGACITY/GP.KW	GP
Vapour Pressure (1) Comment (2)	Torr -	/VP /VP.COM	S 4-5/VP S EQUATION/VP.COM	VP VP
Temperature (1)	cel	/VP.T	S VP>80 and VP.T<5	VP

(1) Numeric search field that may be searched using numeric operators or ranges.

(2) Contains German text.

**Structure and Energy Parameters**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Conformation Object of Investigation	- -	/FA /CNF.OBJ	S CNF/FA S CONFORMER EQUILIBRIUM/ CNF.OBJ	CNF CNF
Dipole Moment (1) Comment (2) Description	D - -	/DM /DM.COM /DM.KW	S 1-1.22/DM S CONCENTRATION/DM.COM S QUADRUPOLE MOMENT/ DM.KW	DM DM DM
Method Solvent Temperature (1)	- - Cel	/DM.MET /DM.SOL /DM.T	S DIELECTRIC/DM.MET S CCL4/DM.SOL S 20>DM.T	DM DM DM
Electrical Polarizability Comment (2)	- -	/FA /POL.COM	S POL/FA S (TIME (P) DEPENDENCE)/POL.COM	POL POL
Description	-	/POL.KW	S ELECTRON POLARIZATION/POL.KW	POL
Electron Binding Comment (2) Description	- - -	/FA /CIP.COM /CIP.KW	S CIP/FA S (EXCITED (P) STATE)/CIP.COM S ELECTRON AFFINITY/CIP.KW	CIP CIP CIP
Energy Barrier of Conformation (1) Barrier Type Comment (2) Solvent	J/mol - - -	/EBC /EBC.TYP /EBC.COM /EBC.SOL	S 1000<=EBC S CF3/EBC.TYP S ROTATION/EBC.COM S TOLUENE/EBC.SOL	EBC EBC EBC EBC
Energy of Dissociation (1) Bond Type Comment (2)	J/mol - -	/EDIS /EDIS.TYP /EDIS.COM	S 12000-14000/EDIS S (P (P) H)/EDIS.TYP S DISSOZIATIONSENERGIE/ EDIS.COM	EDIS EDIS EDIS

## Structure and Energy Parameters (cont'd)

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Interatomic Distance and Angle Comment (2) Description	- - -	/FA /GEO.COM /GEO.KW	S GEO/FA S METHOD/GEO.COM S "INTERATOMIC DISTANCES (P) ANGLES"/GEO.KW	GEO GEO GEO
Ionization Potential (1) Comment (2) Method	eV - -	/IP /IP.COM /IP.MET	S 7-8/IP S VERTICAL/IP.COM S PHOTOIONIZATION/IP.MET	IP IP IP
Molecular Deformation Comment (2) Description	- -	/FA /DFM.COM /DFM.KW	S DFM/FA S ACETONITRIL?/DFM.COM S FORCE CONSTANTS/DFM.KW	DFM DFM DFM

(1) Numeric search field that may be searched using numeric operators or ranges.

(2) Contains German text.

## Thermodynamic Properties

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Enthalpy of Combustion (1) Comment (2) Pressure (1) Temperature (1)	J/mol - Torr Cel	/HCOM /HCOM.COM /HCOM.P /HCOM.T	S HCOM>-100000 S HANDBOOK/HCOM.COM S 760/HCOM.P S 25/HCOM.T	HCOM HCOM HCOM HCOM
Enthalpy of Formation (1) Comment (2) Pressure (1) Temperature (1)	J/mol - Torr Cel	/HFOR /HFOR.COM /HFOR.P /HFOR.T	S 808052/HFOR S HANDBOOK/HFOR.COM S 759-761/HFOR.P S HFOR.T<10	HFOR HFOR HFOR HFOR
Enthalpy of Fusion (1) Comment (2)	J/mol -	/HFUS /HFUS.COM	S 1000-2000/HFUS S HANDBOOK/HFUS.COM	HFUS HFUS
Enthalpy of Hydrogenation (1) Comment (2) Product BRN (1) Product Name (2)	J/mol - none -	/HHDG /HHDG.COM /HHDG.BRN /HHDG.CN	S 153362/HHDG S HANDBOOK/HHDG.COM S 1862856/HHDG.BRN S PHENYL-CYCLOOCTANE/ HHDG.CN	HHDG HHDG HHDG HHDG
Temperature (1)	Cel	/HHDG.T	S 24.9/HHDG.T	HHDG
Enthalpy of Phase Transitions (1) Comment (2)	J/mol -	/HPT /HPT.COM	S 650-700/HPT S (HEXAGONAL (P) CUBIC)/ HPT.COM	HPT HPT
Enthalpy of Sublimation (1) Comment (2) Temperature (1)	J/mol - Cel	/HSUB /HSUB.COM /HSUB.T	S HSUB<40000 S HANDBOOK/HSUB.COM S 25/HSUB.T	HSUB HSUB HSUB
Enthalpy of Vaporization (1) Comment (2) Pressure (1) Temperature (1)	J/mol - Torr Cel	/HVAP /HVAP.COM /HVAP.P /HVAP.T	S 90000>HVAP S HANDBOOK/HVAP.COM S 250>HVAP.P S 20-25/HVAP.T	HVAP HVAP HVAP HVAP
Heat Capacity (CP) (1) Comment (2) Temperature (1)	J/mol*K - F	/CP /CP.COM /CP.T	S 500-501/CP S HANDBOOK/CP.COM S CP.T>500	CP CP CP
Heat Capacity (CP0) (1) Comment (2) Temperature (1)	J/mol*K - Cel	/CP0 /CP0.COM /CP0.T	S 200>CP0 S DETERMIN?/CP0.COM S 200-220/CP0.T	CP0 CP0 CP0

**BEILSTEIN****Thermodynamic Properties (cont'd)**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Heat Capacity (CV) (1) Comment (2) Temperature (1) Other Thermochemical Data Comment (2) Description	J/mol*K - Cel - - -	/CV /CV.COM /CV.T /FA /OTHE.COM /OTHE.KW	S 113/CV S HANDBOOK/CV.COM S 113/CV.T (P) 25/CP S OTHE/FA S HANDBOOK/OTHE.COM S HEAT OF COMBUSTION AT CONSTANT VOLUME/OTHE.KW	CV CV CV OTHE OTHE OTHE

(1) Numeric search field that may be searched using numeric operators or ranges.

(2) Contains German text.

**Transport Phenomena**

Search Field Name	Default Unit	Search Code	Search Examples	Display Codes
Bulk Viscosity (1) Comment (2) Temperature (1) Dynamic Viscosity (1) Comment (2) Temperature (1) Kinematic Viscosity (1) Comment (2) Temperature (1) Self-Diffusion (1) Coefficient (1) Comment (2) Temperature (1) Transport Data Comment (2) Description	g/cm*s - Cel g/cm*s - Cel cm**2/s - Cel cm**2/s - Cel - - -	/BV /BV.COM /BV.T /DV /DV.COM /DV.T /KV /KV.COM /KV.T /SDIF /SDIF.COM /SDIF.T /FA /TRAN.COM /TRAN.KW	S 52-54/BV S CONCENTRATION/BV.COM S 40-60/BV.T S 1.58-1.59/DV S RANGE/DV.COM S 20/DV.T S 1.9988-1.9999/KV S HANDBOOK/KV.COM S 10/KV.T S SDIF>=25 S HANDBOOK/SDIF.COM S 100/SDIF.T S TRAN/FA S PRESSURE/TRAN.COM S THERMAL CONDUCTIVITY/ TRAN.KW	BV BV BV DV DV DV KV KV KV SDIF SDIF SDIF TRAN TRAN TRAN

(1) Numeric search field that may be searched using numeric operators or ranges.

(2) Contains German text.

## DISPLAY and PRINT Formats

Any combination of formats may be used to display or print answers. Multiple codes must be separated by commas or spaces. The fields are displayed or printed in the order requested.

Hit-term highlighting is available for BRN, BSO, CN, COMPBRN, COMPC, COMPN, CONSID, CTYPE, DED, DUPD, FBRN, FMF, FS, FW, LN, LSF, MF, RN, and TAUTID. Highlighting must be ON during SEARCH in order to use the HIT format.

Substance data and reactions are located in different file segments. After searching for a substance or for substance data, two options are available for displaying the reaction information directly related to the substance searched. RX is used to the display all reactions, regardless of search terms.

1. RXPRO (synonym PRE) - to display the reactions with the substance as the reaction product
2. RXREA (synonym REA) - to display the reactions with the substance as a reactant

For cost information, see HELP COST.

Format	Content	Examples
ADSM	Adsorption (MCS) (Description, Partner Beilstein Record Number, Partner, Solvent, Temperature, Pressure, Notes, References)	D ADSM
ASSM	Association (MCS) (Description, Partner Beilstein Record Number, Partner, Solvent, Temperature, Pressure, Notes, References)	D ASSM
AUN	Autonom Name	D AUN
AZE	Azeotropes (MCS) (table containing Value, Temperature, Pressure, Concentration, and Azeotrope BRN, References, Notes)	D AZE
BIO	Biological Behaviour (Species, Media, Concentration, Exposure Period, Temperature, Log BCF, Bioconcentration Factor (BCF), Accumulation Half-Life Time, Accumulation Rate Constant, Elimination Half-Life Time, Elimination Rate Constant, Method, Remarks, Biomagnification, Notes, References)	D BIO
BIOD	Biodegradation (Type, Inoculum, Concentration, Degradation Product BRN, Degradation Rate, Exposure Period, Temperature, Half-Life Time, Method, Remarks, Notes, References)	D 3 BIOD
BP	Boiling Point (table containing Value, Pressure, References, Notes)	D L3 BP
BPR	Beilstein Preferred Record Number	D BPR
BRN	Beilstein Record Number	D BRN
BSO	Beilstein Citation	D BSO
BSPM	Boundary Surface Phenomena (MCS) (Description, Partner Beilstein Record Number, Partner, Solvent, Temperature, Pressure, Notes, References)	D BSPM
BV	Bulk Viscosity (table containing Value, Temperature, References, Notes)	D BV
CDEN	Density of the Crystal (table containing Value, Temperature, References, Notes)	D CDEN
CDER	Chemical Derivative (Derivative BRN, Derivative, Notes, References)	D CDER
CDIC	Circular Dichroism (Solvent, Notes, References)	D L1 CDIC
CIP	Electron Binding (Description, Notes, References)	D CIP
CMC	Critical Micelle Concentration (MCS) (table containing Value, Solvent, Temperature, References, Notes)	D CMC
CMP	Compressibility (Description, Notes, References)	D CMP
CN	Chemical Name	D CN
CNF	Conformation (Object of Investigation, References)	D CNF
COEV	Concentration in Environment (Species, Location, Contamination Concentration, Background Concentration, Method, Remarks, Notes, References)	D COEV
COMPBRN	Composition: Component Beilstein Record Number	D COMPBRN
COMPN	Composition: Component Name	D COMPN
CONSID	Constitution ID	D CONSID
CP	Heat Capacity CP (table containing Value, Temperature, References, Notes)	D L2 CP
CP0	Heat Capacity CP0 (table containing Value, Temperature, References, Notes)	D CP0
CPD	Crystal Property Description (Colour + Other Properties, Notes, References)	D CPD
CPEM	Complex Phase Equilibria (MCS) (Description, Partner Beilstein Record Number, Partner, Solvent, Temperature, Pressure, Notes, References)	D CPEM L7 2

**BEILSTEIN****DISPLAY and PRINT Formats (cont'd)**

Format	Content	Examples
CRD	Critical Density (table containing Value, References, Notes)	D CRD
CRP	Critical Pressure (table containing Value, References, Notes)	D CRP
CRT	Critical Temperature (table containing Value, References, Notes)	D CRT
CRV	Critical Volume (table containing Value, References, Notes)	D CRV
CRYPH	Crystal Phase Description (Description, Temperature, Notes, References)	D CRYPH
CSG	Crystal Space Group (CSG, Notes, References)	D CSG
CSYS	Crystal System (CSYS, Notes, References)	D CSYS
CTP	Crystal Transition Point (table containing Value, Change of Modification, References, Notes)	D L8 CTP
CTYPE	Compound Type	D CTYPE
CV	Heat Capacity CV (table containing Value, Temperature, References, Notes)	D CV
DE	Dissociation Exponent (table containing Value, Dissociation Group, Temperature, Solvent, Method, Type, References, Notes)	D DE
DED	Data Entry Date	D DED
DEN	Liquid Density (table containing Value, Temperature, Reference Temperature, References, Notes)	D DEN
DFM	Molecular Deformation (Description, Notes, References)	D DFM
DIC	Dielectric Constant (table containing Value, Temperature Frequency, References, Notes)	D DIC
DICS	Dielectric Static Constant (table containing Value, Temperature, References, Notes)	D DICS
DM	Dipole Moment (table containing Value, Temperature, Method, Solvent, Description, References, Notes)	D DM L5
DP	Decomposition Point (table containing Value, Solvent, References, Notes)	D DP
DUPD	Data Update Date	D DUPD
DV	Dynamic Viscosity (table containing Value, Temperature, References, Notes)	D DV
EBC	Energy Barrier of Conformation (table containing Value, Barrier Type, Solvent, References, Notes)	D EBC
ECDH	Abiotic Degradation, Hydrolysis (Type, Concentration Degradation Rate, Exposure Period, Temperature, pH-Value, Degradation Product BRN, Degradation Product, Rate Constant, Half-Life Time, Method, Remarks, Notes, References)	D ECDH
ECDP	Abiotic Degradation, Photolysis (Type, Concentration, Degradation Rate, Exposure Period, Temperature, Rate Constant, Half-Life Time, pH-Value, Degradation Product BRN, Degradation Product, Method, Remarks, Notes, References)	D ECDP
ECS	Stability in Soil (Type, Concentration, Dissipation, Dissipation Time 50, Dissipation Time 90, Exposure Period, Temperature, pH-Value, Humidity, Organic Carbon, Cation Exchange Rate, Microbial Biomass, Method, Remarks, Notes, References)	D ECS
ECTD	Ecological Mobility: Transport and Distribution (Type, Media, Results, Method, Remarks, References)	D ECTD
ECTOX	Ecotoxicology (Effect, Endpoint of Effect, Species or Test-System, Sex, Route of Application, Concentration, Kind of Dosing, Exposure Period, Method, Remarks, Further Details, Type, Value of Type, Results, Metabolite BRN, Metabolite, Notes, References)	D ECTOX
EDIS	Energy of Dissoziation (table containing Value, Bond Type, References, Notes)	D EDIS
EDM	Electrical Data (MCS) (Description, Partner Beilstein Record Number, Partner, Temperature, Notes, References)	D EDM
ELCB	Electrochemical Behaviour Description (Description, Notes, References)	D ELCB 5
ELE	Electrical Data (Description, Notes, References)	D ELE
ENEM	Energy Data (MCS) (Description, Partner Beilstein Record Number, Partner, Solvent, Temperature, Pressure, Notes, References)	D ENEM
EOD	Oxygen Demand (Type, Related to, Oxygen Demand, Ratio BOD5/COD, Concentration, Method, Remarks, References)	D EOD
ESR	ESR Data (Description, Coupling Nuclei, Solvents, Temperature, Notes, References)	D ESR
EXCA	Exposure Assessment (Exposure BRN, Sources, References)	D EXCA
FA	Fields Available in the record	D FA

## DISPLAY and PRINT Formats (cont'd)

Format	Content	Examples
FBRN	Component Beilstein Record Number	D FBRN
FINFO	Further Information (References)	D FINFO
FLU	Fluorescence (table containing Description, Solvent, Temperature, References, Notes)	D FLU
FMF (1)	Fragment Molecular Formula	D FMF
FP	Flash Point (table containing Temperature, Type of Test References)	D FP
FS	File Segment	D FS
GEO	Interatomic Distance and Angle (Description, Notes, References)	D GEO
GP	Gas Phase (Description, Notes, References)	DISPLAY L5 GP
HCOM	Enthalpy of Combustion (table containing Value, Temperature, Pressure, References, Notes)	D HCOM
HFOR	Enthalpy of Formation (table containing Value, Temperature, Pressure, References, Notes)	D HFOR
HFUS	Enthalpy of Fusion (table containing Value, References, Notes)	D HFUS
HHDG	Enthalpy of Hydrogenation (table containing Value, Product BRN, Product Name, Temperature, References, Notes)	D HHDG
HNC	Henry Constant (MCS) (table containing Value, Log, Temperature, Solvent, References, Notes)	D HNC
HPT	Enthalpy of Phase Transition (table containing Value, References, Notes)	D L8 HPT
HSUB	Enthalpy of Sublimation (table containing Value, Temperature, References, Notes)	D HSUB
HVAP	Enthalpy of Vaporization (table containing Value, Temperature, Pressure, References, Notes)	D HVAP
IEP	Isoelectric Point (table containing Value, Solvent, References, Notes)	D IEP
INP	Isolation from Natural Product (INP, Notes, References)	D INP
IP	Ionization Potential (table containing Value, Method, References, Notes)	D IP
IR	Infrared Spectrum (table containing Description, Solvent, Temperature, References, Notes)	D IR
KV	Kinematic Viscosity (table containing Value, Temperature, References, Notes)	D KV 17
LIQPH	Liquid Phase Description (Description, Notes, References)	D LIQPH
LLSM	Liquid/Liquid System (MCS) (Description, Partner Beilstein Record Number, Partner, Solvent, Temperature, Pressure, Notes, References)	D LLSM
LN	Lawson Number	D LN
LPTP	Transition Point of Liquid Modification (Table containing Value, Change of Modification, References, Notes)	D LPTP
LSF	Linearized Structure Formula	D LSF
LSSM	Liquid/Solid System (MCS) (Description, Partner Beilstein Record Number, Partner, Solvent, Temperature, Pressure, Notes, References)	D 2 LSSM
LUM	Luminescence (Description, Notes, References)	D LUM
LVSM	Liquid/Vapour System (MCS) (Description, Partner Beilstein Record Number, Partner, Solvent, Temperature, Pressure, Notes, References)	D 5 LVSM
MAG	Magnetic Data (Description, Notes, References)	D MAG
MEC	Mechanical Property (Description, Notes, References)	D MEC
MECM	Mechanical & Physical Property (MCS) (Description, Partner Beilstein Record Number, Partner, Solvent, Temperature, Pressure, Notes, References)	D MECM L3
MF	Molecular Formula	D MF CN
MP	Melting Point (table containing Value, Solvent, References, Notes)	D MP
MS	Mass Spectrum (Description, Notes, References)	D MS
MSUS	Magnetic Susceptibility (Table containing Value, Temperature, References, Notes)	D MSUS
MUT	Mutarotation (table containing Value, Type, Concentration, Length of Path, Solvent, Wavelength, Temperature, Time, References, Notes)	D MUT
MW (FW)	Molecular Weight	D MW
NMR	Nuclear Magnetic Resonance (Description, Nucleus, Coupling Nuclei, Solvents, Temperature, Frequency, Notes, References)	D NMR L1 1
NQR	Nuclear Quadrupole Resonance (Description, Nucleus, Notes, References)	D NQR
ODM	Optical Data (MCS) (Description, Partner BRN, Partner, Notes, References)	D ODM
OPT	Optics (Description, Notes, References)	D OPT
ORD	Optical Rotatory Dispersion (Solvent, Notes, References)	D ORD

**BEILSTEIN****DISPLAY and PRINT Formats (cont'd)**

Format	Content	Examples
ORP	Optical Rotatory Power (table containing Value, Type, Concentration, Length, Solvent, Rotary Wavelength, Temperature, References, Notes)	D ORP
OSM	Other Spectroscopic Methods (Description, Notes, References)	D OSM
OTHE	Other Thermodynamic Data (Description, Notes, References)	D OTHE
PHARM	Pharmacological Data (Effect, Endpoint of Effect, Species or Test-System, Sex, Type, Value of Type, Route of Application, Concentration, Kind of Dosing, Exposure Period, Method, Remarks, Further Details, Results, Metabolite BRN, Metabolite, Notes, References)	D L3 PHARM
PHO	Phosphorescence (table containing Description, Solvent, Temperature, References, Notes)	D PHO
POL	Electrical Polarizability (Description, Notes, References)	D POL
POT	Electrochemical Characteristics (Description, Solvent, pH-Value, Temperature, Product BRN, Product, Notes, References)	D POT
POW	Partition octan-1-ol/water) (MCS) (Table containing Value, Log, Temperature, References)	D POW
PUR	Purification (PUR, References)	D L4 PUR
RAS	Raman Spectrum (Description, Solvent, Notes, References)	D RAS
RI	Refractive Index (table containing Value, Temperature, Wavelength, References, Notes)	D RI
RN	CAS Registry Number	D RN
ROT	Rotational Spectrum (Description, Notes, References)	D ROT
RSTR	Related Structure (Related Structure, Referenced BRN, Referenced Compound, Notes, References)	D L2 RSTR
RXPRO (2) (PRE)	Reactions with the searched substance as a product	D L4 RXPRO D LY PRE
RXREA (2) (REA)	Reactions with the searched substance as a reactant	D RXREA 1-2 D REA 1-2
SDIF	Self-Diffusion (table containing Value, Temperature, References, Notes)	D SDIF L17
SLB	Solubility (MCS) (table containing Value, Saturation, Temperature, Solvent, Ratio of Solvents, References, Notes)	D SLB
SLBP	Solubility Product (MCS) (table containing Value, Temperature, Solvent, Ratio of Solvents, References, Notes)	D SLBP
SOLM	Solution Behaviour (MCS) (Description, Partner BRN, Partner, Solvent, Temperature, Notes, Pressure, References)	D SOLM
SOUND	Acoustic Property (Description, Notes, References)	D SOUND
SP	Sublimation Point (table containing Value, Pressure References, Notes)	D SP
ST	Surface Tension (table containing Value, Temperature, References, Notes)	D ST
STR	Structure	D STR
TAUTID	Tautomer ID	D TAUTID
TP	Triple Point (table containing Value, References, Notes)	D TP
TRAM	Transport Phenomena (MCS) (Description, Partner BRN, Partner, Solvent, Temperature, Pressure, Notes, References)	D TRAM
TRAN	Transport Data (Description, Notes, References)	D L1 TRAN
USC	Use of Compound (Laboratory Use and Handling, Use Pattern, Notes, References)	D USC
UVS	UV and Visible Spectrum (table containing Description, Solvent, Absorption Maxima, Ext./Abs. Coeff., References, Notes)	DISPLAY 1 UVS
VP	Vapour Pressure (table containing Value, Temperature, References, Notes)	D VP
XREF	Crossfile Reference (Data Type, Crossfile Source, Name, External Access ID, References)	D XREF
XS	Cross Section (Description, Notes, References)	D XS

## DISPLAY and PRINT Formats (cont'd)

Format	Content	Examples
ALL (3) ALLP ALLREF BABSAN CHE (4) IDE  RX  MCS (3)  LVS SOL PED (4) ECO (4)  PHY (3)  ECB (4) ELEP (4) MAGP (4) MECP (4) OPTP (4) SAG (3) CRY (4) GAS (4) LIQ (4) SEP (4) SF (4) SPE (3)  THE (4)  TRA (4)	<p>All display fields (CHE, IDE, MCS, PED, PHY, RX) All patent references for a compound All references for a compound All BABS Accession Numbers for a compound Chemical Data (RSTR, INP, CDER, PUR, XREF) Identification of Substance (BRN, BPR, RN, CN, AUN, LSF, FMF (1), MF, MW, FBRN, LN, FS, CTYPE, CONSID, TAUTID, BSO, COMPBRN, COMPN, DED, DUPD, FBRN, FMF, STR, FA) Reaction (Reaction ID, Reactant BRN, Reactant, Product BRN, Product, Number of Reaction Details, Reaction Details (Reaction RID, Reaction Classification, Yield, Number of Stages, Reagent, Stage reactant, Catalyst, Solvent, Time, Temperature, Pressure, pH Value, Subject Studied, Prototype Reaction, Other Conditions, Notes, References) Multi-Component Systems (SOL, LLSM, LSSM, LVS, MECM, TRAM, ENEM, EDM, ODM, BSPM, ADSM, ASSM) Liquid/Vapour System Data (MCS) (LVSM, AZE, CPEM) Solution Behaviour (MCS) (SLB, SLBP, SOLM, CMC, HNC, POW) Pharmacological and Ecological Data (PHARM, ECO) Ecological Data (ECTOX, EXCA, COEV, ECTD, BIO, BIOD, ECDH, ECDP, ECS, EOD, USC) Physical Properties (ECB, ELEP, FINFO, MAGP, MECP, OPTP, SAG, SEP, SF, SPE, THE, TRA) Electrochemical Behaviour (ELCB, DE, IEP, POT, XS) Electrical Properties (DICS, DIC, ELE) Magnetic Properties (MSUS, MAG) Physical and Mechanical Properties (DEN, MEC, CMP, SOUND, ST) Optical Properties (RI, OPT, ORP, MUT, ORD, CDIC) State of Aggregation (CRY, GAS, LIQ) Crystals (CPD, MP, CRYPH, DP, SP, TP, CTP, CSYS, CSG, CDEN) Gases (CRT, CRP, CRD, CRV, VP, GP) Liquids (BP, LIQPH, LPTP) Structure and Energy Parameters (CNF, GEO, DM, POL, DFM, EBC, EDIS, IP, CIP) Safety Data (FP) Spectroscopic Data (NMR, ESR, NQR, ROT, IR, RAS, UVS, LUM, FLU, PHO, OSM, MS) Thermodynamic Properties (HCOM, HFOR, HHDG, HFUS, HVAP, HSUB, HPT, CP, CP0, CV, OTHE) Transport Phenomena (DV, KV, BV, SDIF, TRAN)</p>	<p>DISPLAY ALL D ALLP D ALLREF D BABSAN D CHE DISPLAY L1 IDE  D RX 1-3  D MCSO  D LVS D SOL D PED D ECO  D PHY L6  D ECB D ELEP D L3 MAGP D L9 1-3 MECP D OPTP D SAG L3 D CRY D GAS D LIQ D SEP D SF L8 D SPE  D THE  D TRA</p>
HIT QRD	All fields containing hit terms IDE, HIT (QRD is the default)	D HIT 1-3 D L7 1 5

(1) For compounds consisting of one fragment, FMF is identical with MF and only MF is displayed.

(2) Used when a substance or substance information is searched. RX is used to display all the reaction information, regardless of search terms.

(3) This format may contain data from multiple fee units.

(4) All separate fields included in this format are charged together as one fee unit.

**BEILSTEIN****SELECT, ANALYZE and SORT Fields**

The SELECT command is used to create E-numbers containing terms taken from the specified field in an answer set.

The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.

The SORT command is used to rearrange the search results in either alphanumeric (A) or numeric (N) order of the specified field(s).

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Abiotic Degradation, Hydrolysis; Degradation Product BRN	ECDH.BRN	Y (2)	N
Abiotic Degradation, Photolysis; Degradation Product BRN	ECDP.BRN	Y (2)	N
Adsorption (MCS), Partner BRN	ADSM.PABRN	Y (2)	N
Association (MCS), Partner BRN	ASSM.PABRN	Y (2)	N
Autonom Name	AUN	Y	N
Azeotropes BRN	AZE.PABRN	Y (2)	N
BABS Accession Number	BABSAN	Y	N
Beilstein Preferred Registry Number	BPR	Y	N
Beilstein Record Number	BRN	Y	N
Beilstein Source	BSO	Y	Y
Biodegradation, Degradation Product BRN	BIOD.BRN	Y (2)	N
Boundary Surface Phenomena (MCS), Partner BRN	BSPM.PABRN	Y (2)	N
CAS Registry Number	RN	Y	y
Chemical Derivative BRN	CDER.BRN	Y (2)	N
Chemical Name	CN	Y	y
Complex Phase Equilibria Partner BRN	CPEM.PABRN	Y (2)	N
Composition: Compound BRN	COMPBRN	Y	N
Compound Type	CTYPE	Y	N
Constitution ID	CONSID	Y	N
Ecotoxicology, Metabolite BRN	ECTOX.BRN	Y (2)	N
Electrical Data, Partner BRN	EDM.PABRN	Y (2)	N
Electrochemical Characteristics, Product BRN	POT.PBRN	Y (2)	N
Energy Data (MCS), Partner BRN	ENEM.PABRN	Y (2)	N
Entry Date	DED	Y (3)	N
	ED	Y	N
Enthalpy of Hydrogenation Product BRN	HHDG.BRN	Y (2)	N
File Segment	FS	Y	N
Formula Weight	FW	Y (4)	Y
Fragment BRN	FBRN	y	N
Fragment Molecular Formula	FMF	Y	N
Lawson Number	LN	Y	Y
Linearized Structure Formula	LSF	Y	N
Liquid/Liquid System, Partner BRN	LLSM.PABRN	Y (2)	N
Liquid/Solid System, Partner BRN	LSSM.PABRN	Y (2)	N
Liquid Vapour System, Partner BRN	LVSM.PABRN	Y (2)	N
Mechanical and Physical Property (MCS), Partner BRN	MECM.PABRN	Y (2)	N
Molecular Formula	MF	Y (default)	N
Molecular Weight	MW	Y	N
Optical Data (MCS), Partner BRN	ODM.PABRN	Y (2)	N
Other Source	XREF.SO	Y	N
	OS	Y (5)	N
Patent Number	PN	Y	N
Pharmacological Data, Metabolite BRN	PHARM.BRN	Y (2)	N
Product BRN	RX.PBRN	Y (2)	N

## SELECT, ANALYZE and SORT Fields (cont'd)

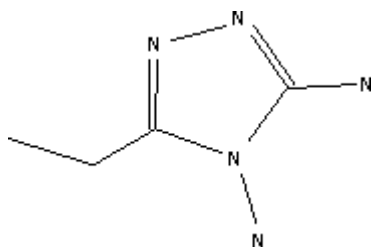
Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Reactant BRN	RX.RBRN	Y (2)	N
Reaction Solvent	RX.SOL	Y (2)	N
Related Structure Referenced BRN	RSTR.PABRN	Y (2)	N
Solution Behaviour, Partner BRN	SOLM.PABRN	Y (2)	N
Stage Reactant BRN	RX.SRBRN	Y (2)	N
STN Update Date	UP	Y (2)	Y
Tautomer ID	TAUTID	Y	N
Transport Phenomena (MCS), Partner BRN	TRAM.PABRN	Y (2)	N

- (1) Hit may be used to restrict extracted terms to terms that match the search expression used to create the answer set, e.g., SEL HIT RN.  
 (2) SELECT HIT and ANALYZE HIT are not valid with this field.  
 (3) Appends /ED to the terms created by SELECT.  
 (4) Appends /MW to the terms created by SELECT.  
 (5) Appends /XREF.SO to the terms created by SELECT.

## Sample Record

## DISPLAY QRD (=&gt; S UVS/FA AND 610966/BRN)

Beilstein Records (BRN): 610966  
 Beilstein Pref. RN (BPR): 5451-40-1  
 CAS Reg. No. (RN): 5451-40-1  
 Chemical Name (CN): 2,6-dichloro-7(9)H-purine,  
 2,6-dichloro-1H-purine, 2,6-dichloropurine  
 Autonom Name (AUN): 2,6-dichloro-9H-purine  
 Molec. Formula (MF): C5 H2 Cl2 N4  
 Molecular Weight (MW): 189.00  
 Lawson Number (LN): 30405  
 Compound Type (CTYPE): heterocyclic  
 Constitution ID (CONSID): 571617  
 Tautomer ID (TAUTID): 17483  
 Beilstein Citation (BSO): 5-26, 6-26  
 Entry Date (DED): 1988/11/28  
 Update Date (DUPD): 2001/07/25



## UV and Visible Spectrum:

Description (.KW)	Ref.
Absorption maxima	1, 2
UV/VIS	3

## Reference(s):

- Barlin; Chapman, J.Chem.Soc., CODEN: JCSOA9, <1965>, 3017,3020
- Ballweg, Justus Liebigs Ann. Chem., CODEN: JLACBF, 649, <1961>, 114,120
- Hosono et al., Bull.Chem.Soc.Jpn., CODEN: BCSJA8, 46, <1973>, 2814,2819