

SOME INFORMATION SOURCES FOR ORGANIC COMPOUNDS

This list is *not* comprehensive, but is intended as an overview of frequently used data compilations of wide scope. *Other reference works may contain the information you need.*

REFERENCE TOOL, CALL #/LOCATION, SIZE/SCOPE	ARRANGEMENT OF COMPOUNDS	INFORMATION PROVIDED	INDEXES, SPECIAL FEATURES	
(1) CRC Handbook of Chemistry and Physics , 75th ed., 1994-1995 (QC 65 H23) Last 2 vols. in Ref. (older eds.: Stacks)	<ul style="list-style-type: none"> >15,000 compounds in main table of organic compounds. Other smaller tables list amino acids, carbohydrates, steroids 1 volume 	<ul style="list-style-type: none"> Alphabetically by common name (with cross indexing to IUPAC names). Derivatives are listed under the parent compound; some important ones are listed separately. Section 3 is devoted to organic compounds (some properties are found in other sections). 	<ul style="list-style-type: none"> Common physical properties listed in main table; additional properties listed in separate tables (a complete list of tables is found under 'Organic Compounds' in the main index) Several indexes appear after main table 	<ul style="list-style-type: none"> Main table lists Beilstein references (updated in 1980), CAS registry numbers, and Merck Index numbers Nomenclature rules excerpts Formula index to main table Subject index for entire handbook
(2) The Merck Index , 11th ed., 1989 (QD 65 M55 1989) Ref., Stacks	<ul style="list-style-type: none"> >10,000 compounds, 55,000 synonyms, 8,000 structures. 1 volume; strong medicinal emphasis, but includes other organic compounds. 	<ul style="list-style-type: none"> Alphabetically by trivial or generic names (also lists synonyms, Chemical Abstracts (CA) names for the 9th and subsequent Collective Index periods) 	<ul style="list-style-type: none"> Molecular weight; % composition; formula and/or structure; physical properties; toxicity; therapeutic category; CA Registry Number; derivatives; references to articles on synthesis, structural studies 	<ul style="list-style-type: none"> Cross index of names; formula index; CA Registry Number index Therapeutic Category and Biological Activity Index (new to 11th edition) List of entries deleted from 9th + 10th eds. NOTE: Section on Organic Name Reactions <i>discontinued with the 11th ed.</i>
(3) Aldrich Catalog Handbook of Fine Chemicals , latest ed. (TP 202 A36) Ref.	<ul style="list-style-type: none"> >34,000 chemicals and related products in 1 volume, available from the Aldrich Chemical Co. 	<ul style="list-style-type: none"> Alphabetically by common names (IUPAC names also listed); cross references to correct entries are provided 	<ul style="list-style-type: none"> Physical properties; CA Registry Number; formula and/or structure; handling precautions; waste disposal methods; prices; use; literature references 	<ul style="list-style-type: none"> Formula index Entries give references to Beilstein, Fieser, Merck Index, Aldrich spectral tables, etc. Additional tables grouped by compound type (dyes, HPLC solvents, etc.)
(4) Handbook of Data on Organic Compounds , 3rd ed. 1994 (HODOC) (QD257.7 C91 1994) Ref. (See related references following this list)	<ul style="list-style-type: none"> >30,000 compounds, 100,000 synonyms included in 6 main + 3 index volumes (supplements planned) A compilation of frequently used chemical, physical, and spectral data geared towards the identification of unknowns. 	<ul style="list-style-type: none"> Alphabetically by Chemical Abstracts name (synonyms and IUPAC names also given); each entry's "HODOC number" used in indexes 	<ul style="list-style-type: none"> Common physical properties; CA Registry Number; Beilstein references; formula(e) and/or structure; spectral data obtained by IR, Raman, UV, MS, H-NMR, and C-NMR methods, with literature references to the original data source(s) Nomenclature policies in volume 1 are reprinted from the Chemical Abstracts Index Guide 	<ul style="list-style-type: none"> Indexes of formulae, molecular weights boiling/melting points, synonyms, CA Registry Numbers Spectral data, further subdivided by chemical class, are "coded with emphasis on selecting values characteristic of compound structure, not necessarily striving for a complete representation of the original spectrum."
(5) Dictionary of Organic Compounds 1982 (Annual Supplements) (QD251 H46 1982) Ref.	<ul style="list-style-type: none"> 150,000 compounds (50,000 entries); 7 vols. in main work (7th supplement includes 1988 references). Simple organics, reagents, solvents, natural products, industrially-used compds. 	<ul style="list-style-type: none"> Alphabetically by "familiar and/or convenient" chemical name (synonyms also listed where necessary); major derivatives listed under the parent compound 	<ul style="list-style-type: none"> Chemical and physical properties; structure; CA Registry Number; hazards; toxicity; source(s) and use; selective references to articles on synthesis, spectra "Updated Entries" in Supplements <i>replace earlier versions of the same entry</i> 	<ul style="list-style-type: none"> Formula index CA Registry Number index Name index (all synonyms listed) Main work has heteroatom index (for more extensive coverage of organometallic compounds, see (9))

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(6) Beilstein's Handbuch der Organischen Chemie ("Beilstein") (QD251 B44) Ref.	<ul style="list-style-type: none"> • Many volumes; "all fully analyzed organic compounds"; covers literature from <1900-79. (latest vols. in progress) 	<ul style="list-style-type: none"> • By compound class according to the Beilstein system (see published charts and "Representative Examples"). Names thus reflect Beilstein priorities; many related compounds are listed together 	<ul style="list-style-type: none"> • Occurrence (in literature references); synthesis; structural and energy parameters; physical and chemical properties; biochemical behavior; uses; salts and addition compounds • Cumulative Errata bound near end of final Part of each Volume; where possible, inserted at appropriate pages as well. 	<ul style="list-style-type: none"> • Latest volumes published in English Earlier supplements are in German • Formula, name indexes in individual and cumulative volumes (all synonyms listed) • All data reviewed and validated • SANDRA (Structure AND Reference Analyzer) PC software gives appropriate volume references from structures drawn on-screen. <i>Now Available!</i>
(7) Lange's Handbook of Chemistry , 14th ed., 1992 (QD65 H22) Ref.	<ul style="list-style-type: none"> • 6000+ organic compounds included, many other property tables provided 	<ul style="list-style-type: none"> • Alphabetically by 1979 IUPAC "senior prefixes" (instead of by the CA system); some cross references to common names. 	<ul style="list-style-type: none"> • Similar to CRC Handbook; see Preface. 	<ul style="list-style-type: none"> • See (1)
(8) CRC Handbook of Tables for Organic Compound Identification, Spectra (QD291 F82 1967)	<ul style="list-style-type: none"> • 8150 parent compounds in 1 volume, comprising 26 organic classes. • Designed "to assist chemists in the identification of [unknown] organic compounds." 	<ul style="list-style-type: none"> • Main division by compound class; within each section, arranged in order of increasing boiling point (liquids) or melting point (solids) of the parent compound 	<ul style="list-style-type: none"> • Appropriate physical data (boiling or melting point, refractive index, density) • Formulae, summary methods of preparation, physical data, and references for diagnostic chemical derivatives. See "Explanations and References" throughout. • Separate tables for dissociation constants, IR/NMR correlation data, solvent pair miscibilities, diamagnetic susceptibilities 	<ul style="list-style-type: none"> • Organic compound name index includes synonyms • Subject / table index
(9) Dictionary of Organometallic Compounds , 1984 (Annual Supplements) (QD411 D55) Ref.	<ul style="list-style-type: none"> • 3 vols in main work (5th supplement includes 1988 references). 	<ul style="list-style-type: none"> • Alphabetically by metallic element symbol; metal section entries arranged in order of increasing Hill System molecular formula (Hill, <i>J. Am. Chem. Soc.</i> 1900, 22(8), 478-494) 	<ul style="list-style-type: none"> • See (5) 	<ul style="list-style-type: none"> • Formula index • CA Registry Number index • Name index • Cumulative Structure index to Supplements 1-5 published in 1990

From entry (4):

Previous compilations published by CRC Press, providing essentially the same information in the presentation format of entry (1), include:

- (10) **Atlas of Spectral Data and Physical Constants for Organic Compounds**, 1973 (QD257.7 C12), 1 volume
- (11) **Atlas of Spectral Data and Physical Constants for Organic Compounds**, 2nd ed., 1975 (QD257.7 C12 1975 Ref.), 6 volumes
- (12) **Handbook of Data on Organic Compounds**, 1985 (QD257.7 C91 Ref.), 2 volume

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