

## The book was found

# Chemistry (Quick Study Academic)

BarCharts, Inc.  
**Quick  
Study**  
**ACADEMIC**

SEARCHES 947 ACADEMIC DEFINITIONS

# CHEMISTRY

**Periodic Table of Elements**

**Atomic Structure**

- Atomic number ( $N$ ): The number of protons in the nucleus. For an atom of charge  $+1$ , it is also the number of electrons. For an atom of charge  $+2$ , it is the number of electrons.
- Mass number ( $A = N + Z$ ): The total number of nucleons in the nucleus.
- Isotopes: Atoms with the same 24 element A, one element can have one or more isotopes. One simple criterion is a number of neutrons. A large number of isotopes is called a nuclear isotope.

**Electron Energy Levels ( $n$ )**

**Atomic Energy ( $E$ )**

**Atomic Quantum Numbers & Orbitals**

- Principal quantum number ( $n$ ): A positive integer (1, 2, 3, ...).
- Angular momentum (orbital shape):  $l = 0, 1, 2, 3$  (s, p, d, f).
- Total angular momentum quantum number:  $l = 0, 1, 2, 3, 4, 5, 6, 7$ .
- For each  $n$ ,  $l$  is possible in values  $0, 1, 2, \dots, n-1$ .
- For each  $n$ ,  $l = 0, 1, 2, 3, 4, 5, 6, 7$  (s, p, d, f).
- Each value of  $n$  is a shell;  $l$  is the orbital section, and  $m_l$  is the orbital.

Principal Quantum Number ( $n$ )	1	2	3	4	5	6	7
Angular Momentum ( $l$ )	s	p	d	f	g	h	i
Orbitals ( $l = 0, 1, 2, 3, 4, 5, 6, 7$ )	1	3	5	7	9	11	13

**Development of the Periodic Table**

- Mosley's law was used to predict missing elements.
- Groups of elements with similar properties were grouped together.
- See complete: [Classification of Elements](#).
- Transition metal compounds:
  - Coordination in aqueous Na<sup>+</sup> bonding ligands
  - Organometallics
  - Complex materials: Metal clusters and clusters
- Periodicity: The chemical properties of an element depend on its atomic structure.
- Family of Elements: Elements in a group.
- The study of a family produces an organized table.

**Periodic Trends**

- Chemical reactivity by the behavior of valence electrons.
- Atomic size: The size of an atom depends on the radius of the outer shell.
- Ionization energy: Ionization energy is the atomic radius/size.

**Practical Application**

The periodic table is used to predict the properties of elements in the physical world.

**Related Material**



## Synopsis

BarCharts™ best-selling quick reference to chemistry has been updated and expanded in this new edition. With updated content and an additional panel of information, this popular guide is not only an essential companion for students in introductory chemistry courses but also a must-have refresher for students in higher-level courses. Author Mark D. Jackson, PhD, a scientist and university chemistry professor, has a gift for making the complicated subject of chemistry interesting and easy to understand without the fluff. In this new edition, you will find more coverage of the subject, helpful illustrations, chemical problems, and practical applications, making this a study tool you won't want to be without.

## Book Information

Series: Quick Study Academic

Cards: 6 pages

Publisher: QuickStudy; Lam Crds edition (May 31, 2012)

Language: English

ISBN-10: 1423218590

ISBN-13: 978-1423218593

Product Dimensions: 8.5 x 11 x 0.1 inches

Shipping Weight: 2.4 ounces (View shipping rates and policies)

Average Customer Review: 4.7 out of 5 starsÂ See all reviewsÂ (52 customer reviews)

Best Sellers Rank: #6,613 in Books (See Top 100 in Books) #3 inÂ Books > Science & Math > Reference #12 inÂ Books > Science & Math > Science for Kids #25 inÂ Books > Textbooks > Science & Mathematics > Chemistry

## Customer Reviews

I am taking College Chemistry levels I & II. I have used this reference multiple times. It has a 2012 copyright, compared to the Chemistry Equations & Answers (2006), both by BarCharts, Inc. This one is by far the more user-friendly. I have tried to use the Equations & Answers, but always fall back to this one. The other one doesn't even have a periodic table, which you are always looking for when studying. This is very helpful to anyone taking an intro HS or college chemistry class. Buy it, you will be thankful later.

Great little resource for intro Chemistry courses. Pros: Cheap! This thing costs less than most specialty coffee drinks. It condenses complex topics into manageable words for students to better

understand. Cons: It is often not required for courses so it will be an additional expense. Overall: If you are new to chemistry this is a must. It will make homework much easier as you do not have to shuffle through books with 500+ pages to find definitions or even some equations. It will likely be more useful than full texts if you have a good professor to first explain concepts to you.

This item is 6 pages long, 3 double-sided laminated pages, not just a single 2 sided laminated page like many of the other study guides. It is very comprehensive and while it may contain too much information for very basic chem classes, it has ALL the information you would need for a quick reference. It is mainly a study aid, it won't give you all the answers - you need to be at the least slightly familiar with the subject for this to help. I am buying a separate periodic table even though this contains a basic one, but it is good enough for basic problem solving!

This is a great reference tool for my Chemistry class. Having the necessary formulas and notes in one place is very helpful. I will have a good 2 years of Chemistry and Organic Chemistry to get through to complete my degree. Tools like these are a Godsend.

Very good resource. I have been working with high-school students in tutoring Chemistry. This is a good resource to see what is needed to answer questions in a concise way that may not be answered simply with their text book. Also good resource for formulas and basic definitions as a reference for studying for tests and review through the semester.

I have taken chemistry three years in a row and every once in a while I forgot about certain things but with this study guide I am able to go back and review the subject without opening my textbook. This product does not take up much space, it fits in a folder and can be taken out easily.

I like the BarCharts. They are very helpful for stuffing a ton of information in a small study sheet. As a quick reference, they are handy. I've used them for Chem, Electronics, Physics and Math. All pretty good for what they are!

All the important chemistry info at your finger tips! A great resource if you are starting out or need a refresher for a more advanced chemistry class. Love the fact that it easily fits into a 3 ring binder for easy access. Not for the lame-brain!

[Download to continue reading...](#)

Chemistry (Quick Study Academic) Surviving Chemistry Workbook: High School Chemistry: 2015 Revision - with NYS Chemistry Reference Tables Math Fundamentals 1 Quick Reference Guide pamphlet (Quick Study Academic) Praxis Core Academic Skills for Educators Exam Secrets Study Guide: Praxis Test Review for the Praxis Core Academic Skills for Educators Tests Nursing Teas Guide (Quick Study Academic) Math Common Core 6Th Grade (Quick Study: Academic) Math Common Core 7Th Grade (Quick Study: Academic) Math Common Core 8Th Grade (Quick Study: Academic) Math Common Core 5Th Grade (Quick Study: Academic) Pharmacology (Quick Study Academic) Anatomy Terminology (Quick Study Academic) Ama Style Guide (Quick Study Academic) Quick-Study Academic/ Nursing Nursing (Quick Study: Academic) Veterinary Assistant (Quick Study: Academic) Quantum Mechanics! The How's and Why's of Atoms and Molecules - Chemistry for Kids - Children's Chemistry Books Sterling Test Prep CLEP Chemistry Practice Questions: High Yield CLEP Chemistry Questions Sterling DAT General Chemistry Practice Questions: High Yield DAT General Chemistry Questions MCAT Chemistry and Organic Chemistry: Content Review for the Revised MCAT Principles of Colloid and Surface Chemistry, Third Edition, Revised and Expanded (Undergraduate Chemistry: A Series of Textbooks)

[Dmca](#)