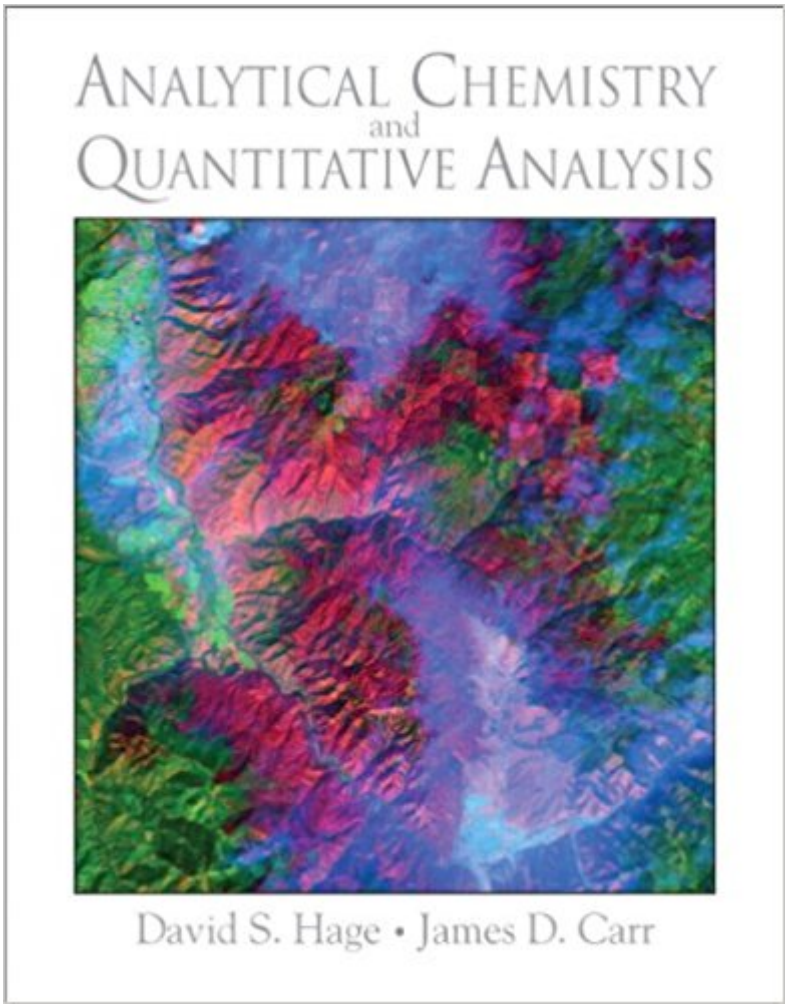
Analytical Chemistry And Quantitative Analysis



Synopsis

Analytical Chemistry and Quantitative Analysis presents concepts and procedures in a manner that reflects the practice and applications of these methods in todayâ ™s analytical laboratories. These methods are illustrated by using current examples from fields that include forensics, environmental analysis, medicine, biotechnology, food science, pharmaceutical science, materials analysis, and basic research.Â The fundamental principles of laboratory techniques for chemical analysis are introduced, along with issues to consider in the appropriate selection and use of these methodsâ ”including the proper use and maintenance of balances, laboratory glassware, and notebooks, as well as mathematical tools for the evaluation and comparison of experimental results. Basic topics in chemical equilibria are reviewed and used to help demonstrate the principles and proper use of classical methods of analysis like gravimetry and titrations.Â Common instrumental techniques are also introduced, such as spectroscopy, chromatography and electrochemical methods.Â Sideboxes discuss other methods, including mass spectrometry and NMR spectroscopy, throughout the text.Â

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"Analytical Chemistry and Quantitative Analysis" presents concepts and procedures in a manner that reflects the practice and applications of these methods in today’s analytical laboratories. These methods are illustrated by using current examples from fields that include forensics, environmental analysis, medicine, biotechnology, food science, pharmaceutical science, materials analysis, and basic research. The fundamental principles of laboratory techniques for chemical analysis are introduced, along with issues to consider in the appropriate selection and use of these

methods-including the proper use and maintenance of balances, laboratory glassware, and notebooks, as well as mathematical tools for the evaluation and comparison of experimental results. Basic topics in chemical equilibria are reviewed and used to help demonstrate the principles and proper use of classical methods of analysis like gravimetry and titrations. Common instrumental techniques are also introduced, such as spectroscopy, chromatography and electrochemical methods. Sideboxes discuss other methods, including mass spectrometry and NMR spectroscopy, throughout the text.

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The course I took covered all chapters. I thought this was a GREAT textbook for learning analytical

chemistry. If you need to save time, get the Solutions Manual for detailed explanations to the chapter exercises. The only other sources I used was Quantitative Chemical Analysis (Harris, 8th ed.) and the ChemLibre online texts for a particular experiment of extracting and measuring caffeine in chocolate.

no issue

I gave 5 stars because .com is the best. I use to buy from Barns & Noble, but no more. I don’t even go into the store. They are horrible, with horrible service and their NookStudy doesn’t even work on the nook (PC only). .com has always sent excellent condition books and most items arrive early. I ordered something with two day shipping and it was here a day early. Wonderful.

The book is the best choice for studying analytical chemistry. It commbines the stuff from Analytical textbooks by Harris and Skoogg presents it in a very understandable manner.

Excellent

Great

Very poor at explaining most things. Mentions the existence of methods and concepts but doesn’t explain them, then has questions about them at the end of the chapter. Vague, generalized blurbs don’t promote a deep understanding of the subject. Normally I can clarify my confusion by careful and thoughtful reading. Not so with this book. Between organic, inorganic, and p chem, this is the worst chem book I’ve used. The further I get, the more confident I feel in my opinion.

We already have three excellent-to-very-good undergraduate analytical chemistry texts on the market - Harris (ISBN 146413538X), Skoog (ISBN 0495558281) and Christian (ISBN 0470887575). All 3 have been around forever and are now refined to the point of near perfection.A recent entrant has already tried to penetrate this market and failed: David Harvey’s "Modern Analytical Chemistry" (ISBN 0072375477), which is a book I strongly like. Do yourself a favor & hunt down a used copy of that or download the revised 2nd edition in PDF from the author’s website at Depauw U. Why pay for a textbook when something so good is available for free?If you look at the table of contents of Hage & Carr (below) and compare it to the above "big 3" you’ll see there’s hardly any difference.

Every book covers the same material in pretty much the same way.Other things not to like about this book:1. the price, for one. Ouch. It's just too expensive for what it is. And if you want the solutions manual - guess what? - that's another $70.2. The text is presented in two columns on every page. Hence, the information density is very high. I'll guess this was done to reduce the page count but it really hurts readability. The authors and publisher should study their competitor, Daniel Harris, and see why he's so enjoyable to read: besides his skill as a writer, his books are well-presented with wide margins which make effective use of whitespace. These are not trivial points to consider when it comes to textbook design.3. Why was all this instrumental analysis material included in what should be a book on basic quantitative analysis? See my review of David Harvey's book for my low opinion of that practice.THE BASIC TOOLS OF ANALYTICAL CHEMISTRYChapter 1 An Overview of Analytical ChemistryChapter 2 Good Laboratory PracticesChapter 3 Mass and Volume MeasurementsChapter 4 Making Decisions with DataChapter 5 Characterization & Selection of Analytical MethodsCHEMICAL REACTIONS AND EQUILIBRIAChapter 6 Chemical Activity & Chemical EquilibriumChapter 7 Chemical Solubility & PrecipitationChapter 8 Acid-Base ReactionsChapter 9 Complex FormationChapter 10 Oxidation-Reduction ReactionsCLASSICAL METHODS OF CHEMICAL ANALYSISChapter 11 Gravimetric MethodsChapter 12 Acid-Base TitrationsChapter 13 Complexometric & Precipitation TitrationsELECTROCHEMICAL METHODSChapter 14 An Introduction to Electroanalytical ChemistryChapter 15 Redox TitrationsChapter 16 Coulometry, Voltammetry & Related MethodsSPECTROPHOTOMETRIC METHODS OF ANALYSISChapter 17 An Introduction to SpectroscopyChapter 18 Molecular SpectroscopyChapter 19 Atomic SpectroscopyANALYTICAL SEPARATIONSChapter 20 An Introduction to Chemical SeparationsChapter 21 Gas ChromatographyChapter 22 Liquid ChromatographyChapter 23 ElectrophoresisAPPENDICESAppendix A Supplemental Information & Derivation of Key EquationsAppendix B Physical & Chemical ConstantsAppendix C Using Spreadsheets for Chemical AnalysisGLOSSARYINDEX

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