

Varian 3400 User Manual

M. Heyl, Raymond R. McGuire

Varian 3400 User Manual:

Handbook of GC-MS Hans-Joachim Hubschmann, 2015-04-27 The only comprehensive reference on this popular and rapidly developing technique provides a detailed overview ranging from fundamentals to applications including a section on the evaluation of GC MS analyses As such it covers all aspects including the theory and principles as well as a broad range of real life examples taken from laboratories in environmental food pharmaceutical and clinical analysis It also features a glossary of approximately 300 terms and a substance index that facilitates finding a specific application. The first two editions were very well received making this handbook a must have in all analytical laboratories using GC MS Chemistry for Technicians, Second Edition John Kenkel, 1994-07-22 The second edition of Analytical Chemistry for Technicians provides the nuts and bolts of analytical chemistry and focuses on the practical aspects for training a technician level laboratory worker This edition presents new and expanded chapters innumerable questions and problems and modified experiments that present a fresh and challenging approach Some of the topics that have been expanded include chemical equilibrium chromatography Kjeldahl method and molarity and moles where EDTA and water hardness calculations are concerned New discussions of the Aq AqCl and combination pH electrodes have been added while the discussion of ion selective electrodes has been expanded The chapter introducing instrumental analysis and computers now includes discussions of y mx b and the method of least squares The book also includes discussions of FTIR topics of NMR and mass spectrometry which are found in the new infrared spectrometry chapter Sustained Trichloroethylene Degradation in Counter-diffusional Membrane-attached Methanotrophic Biofilms Lee W. Clapp, 1999 **Efficient Methods for Preparing** Silicon Compounds Herbert W Roesky, 2016-05-12 Efficient Methods for Preparing Silicon Compounds is a unique and valuable handbook for chemists and students involved in advanced studies of preparative chemistry in academia and industry Organized by the various coordination numbers from two to six of the central silicon atom of the reported compounds this book provides researchers with a handy and immediate reference for any compound or properties needed in the area Edited by a renowned expert in the field each chapter explores a different type of compound thoroughly illustrated with useful schemes and supplemented by additional references Knowledgeable contributors report on a broad range of compounds on which they have published and which are already used on a broad scale or have the potential to be used in the very near future to develop a new field of research or application in silicon chemistry Includes contributions and edits from leading experts in the field Includes detailed chemical schemes and useful references for each preparative method Organized by the coordination numbers of the central silicon atom for each compound for easy navigation Serves as a go to primer for researchers in novel compositions of silicon matter Proceedings of the 1987 EPA/APCA Symposium on **Measurement of Toxic and Related Air Pollutants** ,1987 **Crime Laboratory Digest** ,1988 Handbook of Water Analysis Leo M.L. Nollet, Leen S. P. De Gelder, 2000-06-27 This work details water sampling and preservation methods by

enumerating the different ways to measure physical chemical organoleptical and radiological characteristics It provides step by step descriptions of separation residue determination and cleanup techniques for a variety of fresh and salt waters It also discusses information regarding the analysis and detection of bacteria and algae Encyclopedia of Microfluidics and Nanofluidics Dongging Li,2008-08-06 Covering all aspects of transport phenomena on the nano and micro scale this encyclopedia features over 750 entries in three alphabetically arranged volumes including the most up to date research insights and applied techniques across all areas Coverage includes electrical double layers optofluidics DNC lab on a chip nanosensors and more Quantitative Chromatographic Analysis Thomas Beesley, Benjamin Buglio, 2000-12-06 Highlights critical factors involved in successful chromatographic analysis Details analytical procedures outlining sample preparation collection transportation and storage Provides step by step guidelines for producing analytical reports Methods for Toxics in the Atmosphere Walter L. Zielinski, William D. Dorko, 1990 Techniques in Aquatic Toxicology Gary K. Ostrander, 1996-08-07 This is a comprehensive gathering of measurement and assessment techniques for aquatic toxicants Covering everything from ASTM and similar standard methods to new and innovative techniques Techniques in Aguatic Toxicology provides necessary details on sampling testing and analysis in both saltwater and freshwater environments Research scientists and field and laboratory technicians will find help in testing for everything from assessing DNA damage to bioaccumulation of common toxins to assays of fish embryos and fish tissues Official Register of the Officers and Employees in the Civil Service of the Philippine Islands Philippines. Bureau of Civil Service, 1921

Actinobacteria, a Source of Biocatalytic Tools Dirk Tischler, Willem J. H. van Berkel, Marco W. Fraaije, 2019-08-12 Actinobacteria Actinomycetes represent one of the largest and most diverse phyla among Bacteria The remarkable diversity is displayed by various lifestyles distinct morphologies a wide spectrum of physiological and metabolic activities as well as genetics Interestingly most Actinobacteria have a high GC content ranging from 51% to 70% and belong to Gram positive or Gram variable type microbes Many species are well known for large genomes which may be of linear style as in case of rhodococci or circular Many of those harbor linear megaplasmids as a kind of genetic storage device Frequently gene redundancy is reported and in most cases the evolutionary history or a functional role remains enigmatic Nevertheless these large genomes and megaplasmids provide access to a number of potential homologous biocatalysts which await elucidation Actinobacteria are well known for their biotechnological potential which is exemplarily described for amino acid producing Corynebacteria secondary metabolite producing Streptomyces pathogenic targets as Nocardia and Mycobacteria carotenoid building Micrococcus strains acid fermenting Propionibacteria health and food related Bifidobacterium strains rubber degrading Gordonia species and organic pollutant degrading rhodococci among others In many cases individual pathways or enzymes can be modified or recombinantly employed for biocatalysis Even some genetic tools to work directly in those microbes have been successfully used as for example in Corynebacterium or in Rhodococcus species During the last decade

more and more genomes have been sequenced and made available for data mining and become accessible by state of the art genomic manipulation methods as minimal genomes knock out or artificial evolution With respect to this large and ancient phylum many questions can be asked either from a scientific or industrial point of view In order to provide some crystallization points we like to raise some examples as follows How small can be an actinobacterial genome What is the driving force to comprise large and repetitive genomes megaplasmids What is needed to generate an actinobacterial power house for industry Can we annotate novel biocatalysts from scratch and improve functional annotation What are common and different features with respect to other bacteria and or fungi How many novel antibiotics are hidden among Actinobacteria Is there more potential among extremophile members or are they only specialized Here especially the production of natural compounds is of high interest Trace Environmental Quantitative Analysis Paul R. Loconto, 2020-12-27 A thorough and timely update this new edition presents principles techniques and applications in this sub discipline of analytical chemistry for quantifying traces of potentially toxic organic and inorganic chemical substances found in air soil fish and water as well as serum plasma urine and other body fluids The author addresses regulatory aspects calibration verification and the statistical treatment of analytical data including instrument detection limits quality assurance quality control sampling and sample preparation and techniques that are used to quantify trace concentrations of organic and inorganic chemical substances Key Features Fundamental principles are introduced for the more significant experimental approaches to sample preparation Principles of instrumental analysis determinative techniques for trace organics and trace inorganics analysis An introduction to the statistical treatment of trace analytical data How to calculate instrument detection limits based on weighted least squares confidence band calibration statistics Includes an updated series of student tested experiments

Analytical Chemistry Associated with the Destruction of Chemical Weapons M. Heyl, Raymond R. McGuire, 2012-12-06 One of the major problems associated with the disposal of chemical weapons is that the agents have degraded over time some quite seriously Detecting and identifying the products of this decomposition are necessary prerequisites to the safe complete and environmentally benign destruction of stockpiled weapons The book presents and discusses both basic and novel techniques in a variety of areas of analytical chemistry which are relevant to achieving the ultimate destruction of chemical weapons Presentations address sample collection and preparation mass spectrometry chromatographic techniques NMR and air monitoring techniques The work shows that analytical methods do exist to effectively support the destruction of chemical munitions While further research is needed the book provides an excellent baseline for further advances in the field Perspectives in Flavor and Fragrance Research Philip Kraft, 2005-05-30 It happened in Manchester May 12 14 2004 For the fifth time since the early 1990 s the Royal Society of Chemistry and the Society of the Chemical Industry jointly held their flavours fragrances conference this time in the Manchester Conference Centre of the UMIST Manchester The meeting saw over one hundred participants from one dozen countries and was the

largest of the series so far In two and a half days divided into five sessions twenty five speakers from academia and industry alike presented their recent research results related to this exciting field including Natural Products Foods and Flavors Perfumery and Olfaction and last but not least Fragrance Chemistry Research is more than ever central to the F F industry with its constant demand for innovation and its frequently changing trends Especially in the classic and well explored domains of musks and amber odorants fascinating new discoveries were made only very recently which proves the endless possibilities in the search for new aroma chemicals This was also reflected in the logo of the conference which featured Ambrocenide as a new powerful ambery odorant that emerged from classical cedrene chemistry and it is as well reflected in four of the sixteen conference papers that are collected in this special issue of Chemistry Biodiversity With its focus on biorelevant chemicals Chemistry Biodiversity was predestined to publish the diverse highlight papers of the flavours fragrances conference Fragrance and fragrance materials by definition elicit a biological response serve as versatile signals trigger the sense of smell and taste in various ways and every odorant design is nothing more than chemistry probing nature But Fragrance Chemistry can also document and even preserve the biodiversity of scents as was the topic of the lecture of Roman Kaiser which had been published in advance as the first full paper of Chemistry Biodiversity **Approach to Chemistry Laboratory** Partha Basu, Mitchell Johnson, 2009-05 This book features complete and original labs for the integrated laboratory All materials protocols and equipment are spelled out Each lab is customizable for your department The book introduces and explains a wide range of lab techniques and is geared to various ability levels This volume is intended for chemistry instructors seeking to provide engaging and challenging labs that combine all the features and benefits of the integrated laboratory Written by educators from around the country each chapter of the book contains a fully detailed and explained experiment with guidance for student questions and possible customization The book offers students and instructors a wealth of learning opportunities in experiment preparation measurement recording and analysis from disciplines extending from biology and microbiology to geology nanotechnology and microelectronics All experiments have been classroom tested with safety and monitoring issues given precedence Many of the experiments contain modules that permit the instructor to make the lab more challenging as time and student ability dictate **Methods for Real-Time** Measurement of THMs and HAAs in Distribution Systems - Part 2,2007 In this project researchers developed a practical low cost chemical analyzer for real time monitoring of trihalomethanes THMs and haloacetic acids HAAs in drinking water distribution systems THMs and HAAs are possibly harmful to humans if ingested For this reason the US Environmental Protection Agency established maximum contaminant levels Future regulations might lower the MCL of these substances Real time monitoring of THMs and HAAs will become necessary for future regulatory compliance Performance of Protective Clothing Cherilyn N. Nelson, Norman W. Henry, 2000 **Stability and Stabilization of Biocatalysts** F.J. Plou, J.L. Iborra, P.J. Halling, 1998-11-10 Six years after the symposium on Stability and Stabilization of Enzymes a second

symposium Stability and Stabilization of Biocatalysts on which this book is based was organized At the symposium 210 participants representing all continents came together to learn from 150 oral and poster communications. The volume brings up to date the work already going on and identifies possible breakthroughs in the research. This timely book therefore presents cutting edge developments in topics such as non covalent processes in solution protein engineering and thermophile enzymes immobilized enzymes non conventional media and whole cells. An excellent addition to the available literature it will make a useful contribution to this key area of applied biocatalysis.

Immerse yourself in heartwarming tales of love and emotion with is touching creation, Tender Moments: **Varian 3400 User Manual**. This emotionally charged ebook, available for download in a PDF format (PDF Size: *), is a celebration of love in all its forms. Download now and let the warmth of these stories envelop your heart.

http://www.frostbox.com/data/book-search/default.aspx/wiley financial accounting solutions manual 2012.pdf

Table of Contents Varian 3400 User Manual

- 1. Understanding the eBook Varian 3400 User Manual
 - The Rise of Digital Reading Varian 3400 User Manual
 - Advantages of eBooks Over Traditional Books
- 2. Identifying Varian 3400 User Manual
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
- 3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Varian 3400 User Manual
 - User-Friendly Interface
- 4. Exploring eBook Recommendations from Varian 3400 User Manual
 - Personalized Recommendations
 - Varian 3400 User Manual User Reviews and Ratings
 - Varian 3400 User Manual and Bestseller Lists
- 5. Accessing Varian 3400 User Manual Free and Paid eBooks
 - Varian 3400 User Manual Public Domain eBooks
 - Varian 3400 User Manual eBook Subscription Services
 - Varian 3400 User Manual Budget-Friendly Options
- 6. Navigating Varian 3400 User Manual eBook Formats

- o ePub, PDF, MOBI, and More
- Varian 3400 User Manual Compatibility with Devices
- Varian 3400 User Manual Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Varian 3400 User Manual
 - Highlighting and Note-Taking Varian 3400 User Manual
 - Interactive Elements Varian 3400 User Manual
- 8. Staying Engaged with Varian 3400 User Manual
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Varian 3400 User Manual
- 9. Balancing eBooks and Physical Books Varian 3400 User Manual
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Varian 3400 User Manual
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Varian 3400 User Manual
 - Setting Reading Goals Varian 3400 User Manual
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Varian 3400 User Manual
 - Fact-Checking eBook Content of Varian 3400 User Manual
 - Distinguishing Credible Sources
- 13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
- 14. Embracing eBook Trends
 - Integration of Multimedia Elements
 - Interactive and Gamified eBooks

Varian 3400 User Manual Introduction

In this digital age, the convenience of accessing information at our fingertips has become a necessity. Whether its research papers, eBooks, or user manuals, PDF files have become the preferred format for sharing and reading documents. However, the cost associated with purchasing PDF files can sometimes be a barrier for many individuals and organizations. Thankfully, there are numerous websites and platforms that allow users to download free PDF files legally. In this article, we will explore some of the best platforms to download free PDFs. One of the most popular platforms to download free PDF files is Project Gutenberg. This online library offers over 60,000 free eBooks that are in the public domain. From classic literature to historical documents, Project Gutenberg provides a wide range of PDF files that can be downloaded and enjoyed on various devices. The website is user-friendly and allows users to search for specific titles or browse through different categories. Another reliable platform for downloading Varian 3400 User Manual free PDF files is Open Library. With its vast collection of over 1 million eBooks, Open Library has something for every reader. The website offers a seamless experience by providing options to borrow or download PDF files. Users simply need to create a free account to access this treasure trove of knowledge. Open Library also allows users to contribute by uploading and sharing their own PDF files, making it a collaborative platform for book enthusiasts. For those interested in academic resources, there are websites dedicated to providing free PDFs of research papers and scientific articles. One such website is Academia.edu, which allows researchers and scholars to share their work with a global audience. Users can download PDF files of research papers, theses, and dissertations covering a wide range of subjects. Academia.edu also provides a platform for discussions and networking within the academic community. When it comes to downloading Varian 3400 User Manual free PDF files of magazines, brochures, and catalogs, Issuu is a popular choice. This digital publishing platform hosts a vast collection of publications from around the world. Users can search for specific titles or explore various categories and genres. Issuu offers a seamless reading experience with its user-friendly interface and allows users to download PDF files for offline reading. Apart from dedicated platforms, search engines also play a crucial role in finding free PDF files. Google, for instance, has an advanced search feature that allows users to filter results by file type. By specifying the file type as "PDF," users can find websites that offer free PDF downloads on a specific topic. While downloading Varian 3400 User Manual free PDF files is convenient, its important to note that copyright laws must be respected. Always ensure that the PDF files you download are legally available for free. Many authors and publishers voluntarily provide free PDF versions of their work, but its essential to be cautious and verify the authenticity of the source before downloading Varian 3400 User Manual. In conclusion, the internet offers numerous platforms and websites that allow users to download free PDF files legally. Whether its classic literature, research papers, or magazines, there is something for everyone. The platforms mentioned in this article, such as Project Gutenberg, Open Library, Academia.edu, and Issuu, provide access to a vast collection of PDF files. However, users should always be

cautious and verify the legality of the source before downloading Varian 3400 User Manual any PDF files. With these platforms, the world of PDF downloads is just a click away.

FAQs About Varian 3400 User Manual Books

What is a Varian 3400 User Manual PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. How do I create a Varian 3400 User Manual PDF? There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. How do I edit a Varian 3400 User Manual PDF? Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. How do I convert a Varian 3400 User Manual PDF to another file format? There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. How do I password-protect a Varian 3400 User Manual PDF? Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Varian 3400 User Manual:

wiley financial accounting solutions manual 2012 wiley guide to managing projects

wiley plus homework ch 1question 12 why are wetls important during floods

why do i get sick cell friends book 3 william stallings network security essentials 5th edition

willem poprok opsomming

wiley plus answers managerial chap 4 6th wileyplus solutions manual mechanics of materials 3e

wiley plus accounting answers quiz

wii sports user guide

who was albert einstein

wiley intermediate accounting 10th canadian edition solutions

wiley accounting principles 8th edition solutions manual wiley accounting principles solutions manual 10th

Varian 3400 User Manual:

PLI Practice Test - Prep Terminal Our PLI sample test consists of 50 multiple-choice questions to be answered in 12 minutes. Here you will have the option to simulate a real PI LI test with ... Predictive Index Cognitive Assessment - Free Practice Test Practice for the Predictive Index Cognitive Assessment with our practice test, including Predictive Index test free sample questions with full answers ... Predictive Index Test Sample - Questions & Answers PDF A 6-10 minute survey that asks you to choose adjectives that describe your personality. While it's not a test you can prepare via training, you should follow ... PI Cognitive Assessment Test Prep - 100% Free! a 100% free resource that gives you everything to prepare for the PI Cognitive assessment. Sample questions, practice tests, tips and more! Free Predictive Index Test Sample The test is also known as the Predictive Index Learning Indicator ... Index Behavioral Assessment or PIBA as well as the Professional Learning Indicator or PLI. Free Predictive Index Behavioral & Cognitive Assessments ... The Predictive Index Cognitive Assessment is a 12-minute timed test with multiple-choice questions. It's scored on correct answers, with no penalties for wrong ... PI Cognitive Assessment Guide + Free Full-Length Test - [2023] Here is a brief overview of all 9 PI question types, including one sample

question for each. All sample questions below were taken from the Free Practice. Predictive Index Learning Indicator (PI LI) The Predictive Index Learning Indicator (PI LI), formerly known as Professional Learning Indicator (PLI), is a 12-minute test comprised of 50 questions. The PI ... The PI Cognitive Assessment Sample Questions The use of sample questions is a standard sample for many assessments, including academic assessments such as the SAT, GRE, GMAT, and LSAT, among hundreds of ... Secrets of Customer Relationship Management: It's All about ... Secrets of Customer Relationship Management: It's All about ... Secrets of Customer Relationship... by Barnes, James G. Secrets of Customer Relationship Management: It's All About How You Make Them Feel [Barnes, James G.] on Amazon.com. *FREE* shipping on qualifying offers. Secrets of Customer Relationship Management: It's All ... by S Fournier · 2002 · Cited by 24 — Drawing on extensive consulting and research experiences, Barnes' book provides much original thinking and insight on the subject of relationships that helps ... Secrets of Customer Relationship Management: It's All ... Secrets of Customer Relationship Management: It's All About How You Make Them Feel by Barnes, James G. - ISBN 10: 0071362533 - ISBN 13: 9780071362535 ... Secrets of Customer Relationship... book by James G. Barnes Cover for "Secrets of Customer Relationship Management: It's All about How You Make Them ... CRM is about--making your customer feel good. It's that un ... Secrets of Customer Relationship Management: It's All ... Thus, the secret to customer relationship management, particularly in loyalty programs is, indeed, as Barnes (2001) claims, "all about how you make them feel", ... Secrets of customer relationship management by James G. ... Secrets of customer relationship management. it's all about how you make them feel. by James G. Barnes. 0 Ratings; 12 Want to read; 1 Currently reading ... Secrets of customer relationship management : it's all ... Secrets of customer relationship management: it's all about how you make them feel ... Analyzing relationship quality and its contribution to consumer ... Secrets of Customer Relationship Management: It's All ... Secrets of Customer Relationship Management presents and examines their observable, quantifiable relationship-building techniques and explains how they can be ... Secrets of Customer Relationship Management: It's All ... Sep 28, 2000 — Secrets of Customer Relationship Management: It's All About How You Make Them Feel · Ratings & Reviews · Join the discussion · Discover & Read More. THE NUMBER LINE: AN AUXILIARY MEANS OR AN ... by C Skoumpourdi · Cited by 19 — Abstract. The aim of this paper is to investigate the ways in which the number line can function in solving mathematical tasks by first graders (6 year ... (PDF) The number line: an auxiliary means or an obstacle? ... The aim of this paper is to investigate the ways in which the number line can function in solving mathematical tasks by first graders (6 year olds). The Number Line: An Auxiliary Means or an Obstacle? - ERIC by C Skoumpourdi \cdot 2010 \cdot Cited by 19 — The main research question was whether the number line functioned as an auxiliary means or as an obstacle for these students. Through analysis ... The Number Line - subtraction, and measurement The number line is not just a school object. It is as much a mathematical idea as functions. Unlike the Number Line Hotel, hundreds charts, Cuisenaire rods, and ... What is a Number Line? | Definition and Examples A number line is useful because

it acts as a visual math aid. It can support teachers and parents as they teach children how to count and write numbers. It's ... Common Core State Standards for Mathematics figure and can use the strategy of drawing an auxiliary line for solving problems. ... Understand a fraction as a number on the number line; represent fractions ... how kindergartners use auxiliary means to solve problems Sep 3, 2010 — The aim of this paper is to investigate the role that auxiliary means (manipulatives such as cubes and representations such as number line) ... Number Line - Definition, Examples | Inequalities A number line is a visual representation of numbers on a straight line. This line is used to compare numbers that are placed at equal intervals on an infinite ... Massachusetts Mathematics Curriculum Framework — 2017 ... auxiliary line for solving problems. They also can step ... Understand a fraction as a number on the number line; represent fractions on a number line diagram. Michigan Math Standards figure and can use the strategy of drawing an auxiliary line for solving problems. ... A diagram of the number line used to represent numbers and support ...