Sensory Discrimination Tests and Measurements: Statistical Principles Procedures and Tables


Sensory evaluation methods are extensively used in the wine, beer and distilled spirits industries for product development and quality control, while consumer research methods also offer useful insights as the product is being developed. This book introduces sensory evaluation and consumer research methods and provides a detailed analysis of their applications to a variety of different alcoholic beverages. Chapters in part one look at the principles of sensory evaluation and how these can be applied to alcoholic beverages, covering topics such as shelf life evaluation and gas chromatography – olfactometry. Part two concentrates on fermented beverages such as beer and wine, while distilled products including brandies, whiskies and many others are discussed in part three. Finally, part four examines how consumer research methods can be employed in product development in the alcoholic beverage industry. With its distinguished editor and international team of contributors, Alcoholic beverages is an invaluable reference for those in the brewing, winemaking and distilling industries responsible for product development and quality control, as well as for consultants in sensory and consumer science and academic researchers in the field. Comprehensive analysis of sensory evaluation and consumer research methods in the alcoholic beverage industry considers shelf life evaluation, product development and gas chromatography. Chapters examine beer, wine, and distilled products, and the application of consumer research in their production. The U.S. Social Security Administration (SSA) provides disability benefits through the Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI) programs. To receive SSDI or SSI disability benefits, an individual must meet the statutory definition of disability, which is “the inability to engage in any
substantial gainful activity [SGA] by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months." SSA uses a five-step sequential process to determine whether an adult applicant meets this definition. Functional Assessment for Adults with Disabilities examines ways to collect information about an individual's physical and mental (cognitive and noncognitive) functional abilities relevant to work requirements. This report discusses the types of information that support findings of limitations in functional abilities relevant to work requirements, and provides findings and conclusions regarding the collection of information and assessment of functional abilities relevant to work requirements. Detection Theory is an introduction to one of the most important tools for analysis of data where choices must be made and performance is not perfect. Originally developed for evaluation of electronic detection, detection theory was adopted by psychologists as a way to understand sensory decision making, then embraced by students of human memory. It has since been utilized in areas as diverse as animal behavior and X-ray diagnosis. This book covers the basic principles of detection theory, with separate initial chapters on measuring detection and evaluating decision criteria. Some other features include: *complete tools for application, including flowcharts, tables, pointers, and software; *student-friendly language; *complete coverage of content area, including both one-dimensional and multidimensional models; *separate, systematic coverage of sensitivity and response bias measurement; *integrated treatment of threshold and nonparametric approaches; *an organized, tutorial level introduction to multidimensional detection theory; *popular discrimination paradigms presented as applications of multidimensional detection theory; and *a new chapter on ideal observers and an updated chapter on adaptive threshold measurement. This up-to-date summary of signal detection theory is both a self-contained reference work for users and a readable text for graduate students and other researchers learning the material either in courses or on their own. Discrimination Testing in Sensory Science: A Practical Handbook is a one-stop-shop for practical advice and guidance on the performance and analysis of discrimination testing in sensory science. The book covers all aspects of difference testing: the history and origin of different methods, the practicalities of setting up a difference test, replications, the statistics behind each test, dealing with the analysis, action standards, and the statistical analysis of results with R. The book is written by sensory science experts from both academia and industry, and edited by an independent sensory scientist with over twenty years of experience in planning, running and analyzing discrimination tests. This is an essential text for academics in sensory and consumer science and any sensory scientist working in research and development in food, home, and personal care products, new product development, or quality control. Contains practical guidance on the performance and analysis of discrimination testing in sensory science. Includes the latest developments in difference testing, including both new methods and state-of-the-art approaches Features extensive coverage of analysis with a variety of software systems Provides essential insight for academics in sensory and consumer science and any sensory scientist working in research and development in food, home, and personal care products, new product development, or quality controlCovering all aspects of sensory panel management, this volume describes the different types of sensory panels (for example panels for quality control, descriptive
analysis and discrimination tests), discusses the issues involved with sensory
testing, and gives detailed information about sensory panel recruitment, training
and on-going management. Sensory Panel Management gives both theoretical and
practical information from deciding what type of panel to recruit and how to
conduct panel training, to creating the best sensory team and how to deal with
any issues. Downloads of several of the documents included in the book are
available from http://www.laurenlrogers.com/sensory-panel-management.html
The book is divided into three main sections. The first section looks at the
recruitment of sensory panels, covering the process from both a scientific and a
human resources angle. The second section deals with the training of a sensory
panel. Initial training, as well as method and product specific training is covered.
Example session plans for running panel sessions for quality control,
discrimination tests, descriptive profiling, temporal methods and consumer tests
are included within the specific chapters. Refresher and advanced training such
as training panelists to take part in gas chromatography-olfactometry are also
included. The third section examines the performance of sensory panels. Chapters
within this section explore performance measures and ways of preventing (and
dealing with) difficult situations relating to panellists. A final chapter looks at the
future of sensory panels. Throughout the book there are short case study
examples demonstrating the practical application of the methods being discussed.
Sensory Panel Management is a key reference for academics, technical and
sensory staff in food companies. Lauren Rogers is an independent sensory science
consultant in the UK with more than twenty years of practical experience. She has
worked on a wide variety of projects, including shelf life studies, product and
flavor optimization, new flavor development and in-depth brand analyses. She is a
member of the Society of Sensory Professionals, the Institute of Food Science and
Technology’s Sensory Science Group, the Sensometric Society and is also a
member of the ASTM Sensory Evaluation Committee (E18). Discusses sensory
panels for testing food and non-food based products Covers best practices for
recruitment, selection and training of panels Provides examples of training plans
for sensory panels Encompasses experimental design and data analysis of panel
results Organized in modular format for practical usesSignal detection theory--as
developed in electrical engineering and based on statistical decision theory--was
first applied to human sensory discrimination 40 years ago. The theoretical intent
was to provide a valid model of the discrimination process; the methodological
intent was to provide reliable measures of discrimination acuity in specific
sensory tasks. An analytic method of detection theory, called the relative
operating characteristic (ROC), can isolate the effect of the placement of the
decision criterion, which may be variable and idiosyncratic, so that a pure
measure of intrinsic discrimination acuity is obtained. For the past 20 years, ROC
analysis has also been used to measure the discrimination acuity or inherent
accuracy of a broad range of practical diagnostic systems. It was widely adopted
by methodologists in the field of information retrieval, is increasingly used in
weather forecasting, and is the generally preferred method in clinical medicine,
primarily in radiology. This book attends to both themes, ROC analysis in the
psychology laboratory and in practical diagnostic settings, and to their essential
unity. The focus of this book is on detection and recognition as fundamental tasks
that underlie most complex behaviors. As defined here, they serve to distinguish
between two alternative, confusable stimulus categories, which may be
perceptual or cognitive categories in the psychology laboratory, or different states
of the world in practical diagnostic tasks. This book on signal detection theory in psychology was written by one of the developers of the theory, who co-authored with D.M. Green the classic work published in this area in 1966 (reprinted in 1974 and 1988). This volume reviews the history of the theory in engineering, statistics, and psychology, leading to the separate measurement of the two independent factors in all discrimination tasks, discrimination acuity and decision criterion. It extends the previous book to show how in several areas of psychology--in vigilance and memory--what had been thought to be discrimination effects were, in reality, effects of a changing criterion. The book shows that data plotted in terms of the relative operating characteristic have essentially the same form across the wide range of discrimination tasks in psychology. It develops the implications of this ROC form for measures of discrimination acuity, pointing up the valid ones and identifying several common, but invalid, ones. The area under the binormal ROC is seen to be supported by the data; the popular measures \( d' \) and percent correct are not. An appendix describes the best, current programs for fitting ROCs and estimating their parameters, indices, and standard errors. The application of ROC analysis to diagnostic tasks is also described. Diagnostic accuracy in a wide range of tasks can be expressed in terms of the ROC area index. Choosing the appropriate decision criterion for a given diagnostic setting--rather than considering some single criterion to be natural and fixed--has a major impact on the efficacy of a diagnostic process or system. Illustrated here by separate chapters are diagnostic systems in radiology, information retrieval, aptitude testing, survey research, and environments in which imminent dangerous conditions must be detected. Data from weather forecasting, blood testing, and polygraph lie detection are also reported. One of these chapters describes a general approach to enhancing the accuracy of diagnostic systems.

Principles of Sensory Evaluation of Food covers the concepts of sensory physiology and the psychology of perception. This book is composed of 11 chapters that specifically consider the significance of these concepts in food sensory analysis. After providing a brief introduction to problems related to sensory evaluation in food industry, this book goes on examining the physiology and psychology of the senses. The succeeding chapters survey the status of methodology and appropriate statistical analyses of the results. These topics are followed by discussions on the problems of measuring consumer acceptance. Food acceptance and preference depend on human sensory responses. The remaining chapters describe the relationship between sensory characteristics and various physical and chemical properties of foods. This book will prove useful to food scientists and researchers. This is a comprehensive and unique text that details the latest research on smell and taste disorders for use by clinicians and scientists. Using the most well-studied behavioral analyses of animal subjects to promote a better understanding of the effects of disease and the effects of new therapeutic treatments on human cognition, Methods of Behavior Analysis in Neuroscience provides a reference manual for molecular and cellular research scientists in both academia and the pharmaceutic. Sensory discriminative analysis forms a fundamental type of methodology and is used widely in sensory and consumer research. Sensory Discrimination Tests and Measurements: Statistical Principles, Procedures and Tables provides a comprehensive discussion of sensory discriminative analysis from a statistical perspective. A wide variety of test and measurement methods, which were developed during the past decades and scattered in various statistical and non-statistical journals, are included in the
The book gives a unified picture of the state of the subject and reflects some features of advanced sensory discriminative analysis. Designed to be both a reference manual and a research monograph, practitioners will discover various useful test and measurement procedures. More statistically-oriented readers will find the statistical considerations behind the procedures. Sensory Discrimination Tests and Measurements will be of interest to everyone concerned with testing and measuring sensory difference and consumer preference.

Nonfood Sensory Practices aims to show how sensory professionals from sectors other than food have embraced sensory evaluation methods for product development and communication of their products' sensory properties. This book is thus intended as a first assessment of what is happening in nonfood sectors. It will open perspectives to those sensory professionals who wish to apply and adapt their expertise in food sensory science to other types of products, as well as to those working in nonfood sectors but with lesser background in sensory evaluation. Many nonfood products are intrinsically complex. They can be used in diverse ways, often in strong interaction with context and – unlike food – over several hours, days or months. This book shows how sensory professionals have adapted to these specificities, not to mention specific needs in terms of panel management and different ways to deal with consumers, users, customers or even sometimes with patients. First chapters present general methodological principles that will allow readers to fully apprehend the use of sensory practices. Then, contributions from many professionals in nonfood sectors will help to realize and promote the potential added value of sensory evaluation to their own field of application. Presents methodological specificities and solutions for the sensory evaluation of non-food products. Includes case studies that help readers understand how to adapt food-centric sensory methods developed for non-food applications and further useful developments for the sensory evaluation of food products and the study of food-related consumer behaviors.

This book is a practical guide to sensory evaluation methods and techniques in the food, cosmetic and household product industries. It explains the suitability of different testing methods for different situations and offers step-by-step instructions on how to perform the various types of tests. Covering a broad range of food and non-food product applications, the book is designed to be used as a practical reference in the testing environment; a training manual for new recruits into sensory science, and a course book for students undertaking industrial training or academic study.

Sensory and Instrumental Evaluation of Alcoholic Beverages introduces the value of sensory analysis to the alcoholic beverage industry through the detailed lens of sensory analysis techniques. From traditional methods, to the most modern rapid methods, this book presents comprehensive insights and applications. Analytical methods for identifying and assessing the flavor compounds present in the beverages are included that address both volatile and non-volatile techniques, along with rapid methods of assessment. Case studies highlight the testing of different types of alcoholic beverages running the entire gamut of methods and the appropriate subset of methods. Also included is information of data analyses with the appropriate R-codes to allow practitioners to use the book as a handbook to analyze their own data. Uniquely focused on alcoholic beverages and their assessment. Includes real-world information for practical application. Presents a full range of methodologies, providing key
comparative insights

As we move further into the 21st Century, sensory and consumer studies continue to develop, playing an important role in food science and industry. These studies are crucial for understanding the relation between food properties on one side and human liking and buying behaviour on the other. This book by a group of established scientists gives a comprehensive, up-to-date overview of the most common statistical methods for handling data from both trained sensory panels and consumer studies of food. It presents the topic in two distinct sections: problem-orientated (Part I) and method orientated (Part II), making it to appropriate for people at different levels with respect to their statistical skills. This book successfully: Makes a clear distinction between studies using a trained sensory panel and studies using consumers. Concentrates on experimental studies with focus on how sensory assessors or consumers perceive and assess various product properties. Focuses on relationships between methods and techniques and on considering all of them as special cases of more general statistical methodologies It is assumed that the reader has a basic knowledge of statistics and the most important data collection methods within sensory and consumer science. This text is aimed at food scientists and food engineers working in research and industry, as well as food science students at master and PhD level. In addition, applied statisticians with special interest in food science will also find relevant information within the book.

Wine Tasting: A Professional Handbook is an essential guide for any professional or serious connoisseur seeking to understand both the theory and practice of wine tasting. From techniques for assessing wine properties and quality, including physiological, psychological, and physicochemical sensory evaluation, to the latest information on types of wine, the author guides the reader to a clear and applicable understanding of the wine tasting process. Including illustrative data and testing technique descriptions, Wine Tasting is for professional tasters, those who train tasters and those involved in designing wine tastings as well as the connoisseur seeking to maximize their perception and appreciation of wine. Revised and updated coverage, notably the physiology and neurology taste and odor perception Expanded coverage of the statistical aspect of wine tasting (specific examples to show the process), qualitative wine tasting (examples for winery staff tasting their own wines; more examples for consumer groups and restaurants), tripling of the material on wine styles and types, wine language, the origins of wine quality, and food and wine combination Flow chart of wine tasting steps Flow chart of wine production procedures Practical details on wine storage and problems during and following bottle opening Examples of tasting sheets Details of errors to be avoided Procedures for training and testing sensory skill Sensory evaluation is a scientific discipline used to evoke measure, analyse and interpret responses to products perceived through the senses of sight, smell, touch, taste and hearing. It is used to reveal insights into the way in which sensory properties drive consumer acceptance and behaviour, and to design products that best deliver what the consumer wants. It is also used at a more fundamental level to provide a wider understanding of the mechanisms involved in sensory perception and consumer behaviour. Quantitative Sensory Analysis is an in-depth and uniquetreatment of the quantitative basis of sensory testing, enabling scientists in the food, cosmetics and personal care product industries to gain objective insights into consumer preference data—vital for informed new product development. Written by a globally-recognised leader in the field, this book is suitable for industrial sensory evaluation practitioners, sensory scientists,
advanced undergraduate and graduate students in sensory evaluation and sensometricians. The recording and analysis of food data are becoming increasingly sophisticated. Consequently, the food scientist in industry or at study faces the task of using and understanding statistical methods. Statistics is often viewed as a difficult subject and is often avoided because of its complexity and a lack of specific application to the requirements of food science. This situation is changing – there is now much material on multivariate applications for the more advanced reader, but a case exists for a univariate approach aimed at the non-statistician. This second edition of Statistical Methods for Food Science provides a source text on accessible statistical procedures for the food scientist, and is aimed at professionals and students in food laboratories where analytical, instrumental and sensory data are gathered and require some form of summary and analysis before interpretation. It is suitable for the food analyst, the sensory scientist and the product developer, and others who work in food-related disciplines involving consumer survey investigations will also find many sections of use. There is an emphasis on a 'hands-on' approach, and worked examples using computer software packages and the minimum of mathematical formulae are included. The book is based on the experience and practice of a scientist engaged for many years in research and teaching of analytical and sensory food science at undergraduate and post-graduate level. This revised and updated second edition is accompanied by a new companion website giving the reader access to the datasets and Excel spreadsheets featured in the book. Check it out now by visiting ahref="http://www.wiley.com/go/bower/statistical"www.wiley.com/go/bower/statistical/a or by scanning the QR code below. Sensory analysis is not new to the food industry, but its application as a basic tool in food product development and quality control has not been given the recognition and acceptance it deserves. This, we believe, is largely due to the lack of understanding about what sensory analysis can offer in product research, development and marketing, and a fear that the discipline is 'too scientific' to be practical. To some extent, sensory scientists have perpetuated this fear with a failure to recognize the constraints of industry in implementing sensory testing procedures. These guidelines are an attempt to redress the balance. Of course, product 'tasting' is carried out in every food company: it may be the morning tasting session by the managing director, competitor comparisons by the marketeers, tasting by a product 'expert' giving a quality opinion, comparison of new recipes from the product development kitchen, or on-line checking during production. Most relevant, though, is that the people responsible for the tasting session should know why the work is being done, and fully realize that if it is not done well, then the results and conclusions drawn, and their implications, are likely to be misleading. If, through the production of these guidelines, we have influenced some people sufficiently for them to re-evaluate what they are doing, and why, we believe our efforts have been worthwhile. The field of sensory science has grown exponentially since the publication of the previous version of this work. Fifteen years ago the journal Food Quality and Preference was fairly new. Now it holds an eminent position as a venue for research on sensory test methods (among many other topics). Hundreds of articles relevant to sensory testing have appeared in that and in other journals such as the Journal of Sensory Studies. Knowledge of the intricate cellular processes in chemoreception, as well as their genetic basis, has undergone nothing less than a revolution, culminating in the award of the Nobel Prize to Buck and Axel in 2004 for their discovery of the olfactory receptor gene super
family. Advances in statistical methodology have accelerated as well. Sensometrics meetings are now vigorous and well-attended annual events. Ideas like Thurstonian modeling were not widely embraced 15 years ago, but now seem to be part of the everyday thought process of many sensory scientists. And yet, some things stay the same. Sensory testing will always involve human participants. Humans are tough measuring instruments to work with. They come with varying degrees of acumen, training, experiences, differing genetic equipment, sensory capabilities, and of course, different preferences. Human foibles and their associated error variance will continue to place a limitation on sensory tests and actionable results. Reducing, controlling, partitioning, and explaining error variance are all at the heart of good test methods and practices.

Balance, Gait, and Falls, Volume 159 presents the latest information on sensorimotor anatomy, sensory integration, gravity and verticality, standing balance, balance perturbations, voluntary stepping and gait initiation, gait and gait adaptability, disorders of balance and gait that result from aging and neurological diseases. The book provides a brief overview of age-related changes in the structure and function of sensorimotor and central processes, with sections specifically devoted to Parkinson’s disease, parkinsonism, cerebellar ataxia, stroke, corticobasal degeneration, multiple sclerosis, Huntington’s disease, dystonia, tremor, Alzheimer’s disease, frontotemporal dementia, cerebral palsy, polio, motor neuron disease, brainstem lesions, spinal lesions, peripheral nerve disease, and psychogenic conditions. Diseases covered have a common structure comprising background and epidemiology, pathology, balance disorders, gait disorders, falls, therapies (including fall prevention), and future directions. Covers all aspects of basic and clinical research on disorders of balance and gait in neurological disease. Presents a multidisciplinary review of balance and gait physiology, the epidemiology and natural history of balance and gait impairments in aging, and a broad range of neurological diseases. Addresses impairments of balance and gait for basic and clinical researchers in neuroscience, human movement science, physiotherapy and exercise physiology.

Meat has been a long sought after source of nutrients in human diets. Its nutrient-dense composition of protein, fats, vitamins and minerals makes it an integral part to healthy and balanced diets. As demand for meat continues to increase globally, a better understanding of efficiently producing quality meat products is becoming increasingly important. The Science of Meat Quality provides comprehensive coverage of meat quality from the biological basis of muscle development to end-product-use topics such as preparation and sensory analysis. The Science of Meat Quality explores the basis of meat quality long before it hits grocery store shelves. The book opens with a look at cellular muscle tissue development, metabolism and physiology. Subsequent chapters look at topics surrounding the development of tenderness, water-holding capacity, lipid oxidation and color in meat products. The final chapters discuss producing a good-tasting end product from preparing meat to preventing food-borne illness. Each chapter contains not only the theory behind that topic, but also detailed lab methodologies for measuring each meat quality trait. The Science of Meat Quality is an essential resource and reference for animal scientists, meat scientists, food scientists, and food industry personnel. Meat has been a long sought after source of nutrients in human diets. Its nutrient-dense composition of protein, fats, vitamins and minerals makes it an integral part to healthy and balanced diets. As demand for meat continues to increase globally, a better understanding of efficiently producing quality meat products is becoming
increasingly important. The Science of Meat Quality provides comprehensive coverage of meat quality from the biological basis of muscle development to end-product-use topics such as preparation and sensory analysis. The Science of Meat Quality explores the basis of meat quality long before it hits grocery store shelves. The book opens with a look at cellular muscle tissue development, metabolism and physiology. Subsequent chapters look at topics surrounding the development of tenderness, water-holding capacity, lipid oxidation and color in meat products. The final chapters discuss producing a good-tasting end product from preparing meat to preventing food-borne illness. Each chapter contains not only the theory behind that topic, but also detailed lab methodologies for measuring each meat quality trait. The Science of Meat Quality is an essential resource and reference for animal scientists, meat scientists, food scientists, and food industry personnel.Why are some people more mentally able than others? In an authoritative, critical and intergrated series of review essays Professor Ian Deary inquires after the cognitive and biological foundations of human mental ability differences. Many accounts of intelligence have examined the structure and number of human mental ability differences and whether they can predict success in education, work and social life. Few books have taken psychometric intelligence differences as a starting point and brought together the reductionistic attempts to explain them.New to the highly acclaimed Oxford Psychology Series, Looking Down on Human Intelligence appraises the search for the origins of psychometric intelligence differences in terms of brain function parameters. The book provides an original and thought provoking guide to ancient and modern research on one of the most compelling questions in human psychology.Sensory Evaluation Practices examines the principles and practices of sensory evaluation. It describes methods and procedures for the analysis of results from sensory tests; explains the reasons for selecting a particular procedure or test method; and discusses the organization and operation of a testing program, the design of a test facility, and the interpretation of results. Comprised of three parts encompassing nine chapters, this volume begins with an overview of sensory evaluation: what it does; how, where, and for whom; and its origin in physiology and psychology. It then discusses measurement, psychological errors in testing, statistics, test strategy, and experimental design. The reader is also introduced to the discrimination, descriptive, and affective methods of testing, along with the criteria used to select a specific method, procedures for data analysis, and the communication of actionable results. The book concludes by looking at problems where sensory evaluation is applicable, including correlation of instrumental and sensory data, measurement of perceived efficacy, storage testing, and product optimization. This book is a valuable resource for sensory professionals, product development and production specialists, research directors, technical managers, and professionals involved in marketing, marketing research, and advertising.Sensory testing and measurement are the main functions of sensory analysis. In recent years, the sensory and consumer field has evolved to include both difference testing and similarity testing, and new sensory discrimination methods such as the tetrads have received more attention in the literature. This second edition of Sensory Discrimination Tests and Measurements is updated throughout and responds to these changes and includes: A wide range of sensory measurements: Measurements of sensory effect (d', R-index and Gini-index); Measurements of performance of trained sensory panel (Intraclass correlation coefficients and Cronbachs coefficient alpha); Measurements of relative importance of correlated
sensory and consumer attributes (drivers of consumer liking or purchase intent); Measurements of consumer emotions and psychographics; Measurements of time-intensity; Measurements of sensory thresholds; Measurements of sensory risk with negative sensory effects (Benchmark Dose, BMD, methodology) Measurements of sensory shelf life (SSL). A balanced introduction of sensory discrimination tests including difference tests and similarity tests. Bayesian approach to sensory discrimination tests. Modified and multiple-sample discrimination tests. Replicated discrimination tests using the beta-binomial (BB), corrected beta-binomial (CBB), and Dirichlet-multinomial (DM) models. Sensory discrimination methods including the tetrads and the M+N. R and S-Plus codes for all the measurements and tests introduced in the book. Mainly intended for researchers and practitioners in the sensory and consumer field, the book is a useful reference for modern sensory analysis and consumer research, especially for sensometrics. Producing products of reliable quality is vitally important to the food and beverage industry. In particular, companies often fail to ensure that the sensory quality of their products remains consistent, leading to the sale of goods which fail to meet the desired specifications or are rejected by the consumer. This book is a practical guide for all those tasked with using sensory analysis for quality control (QC) of food and beverages. Chapters in part one cover the key aspects to consider when designing a sensory QC program. The second part of the book focuses on methods for sensory QC and statistical data analysis. Establishing product sensory specifications and combining instrumental and sensory methods are also covered. The final part of the book reviews the use of sensory QC programs in the food and beverage industry. Chapters on sensory QC for taint prevention and the application of sensory techniques for shelf-life assessment are followed by contributions reviewing sensory QC programs for different products, including ready meals, wine and fish. A chapter on sensory QC of products such as textiles, cosmetics and cars completes the volume. Sensory analysis for food and beverage quality control is an essential reference for anyone setting up or operating a sensory QC program, or researching sensory QC. Highlights key aspects to consider when designing a quality control program including sensory targets and proficiency testing. Examines methods for sensory quality control and statistical data analysis. Reviews the use of sensory quality control programs in the food and beverage industry featuring ready meals, wine and fish. When children and adults apply for disability benefits and claim that a visual impairment has limited their ability to function, the U.S. Social Security Administration (SSA) is required to determine their eligibility. To ensure that these determinations are made fairly and consistently, SSA has developed criteria for eligibility and a process for assessing each claimant against the criteria. Visual Impairments: Determining Eligibility for Social Security Benefits examines SSA’s methods of determining disability for people with visual impairments, recommends changes that could be made now to improve the process and the outcomes, and identifies research needed to develop improved methods for the future. The report assesses tests of visual function, including visual acuity and visual fields whether visual impairments could be measured directly through visual task performance or other means of assessing disability. These other means include job analysis databases, which include information on the importance of vision to job tasks or skills, and measures of health-related quality of life, which take a person-centered approach to assessing visual function testing of infants and children, which differs in important ways from standard adult tests. The Essential Guide to Doing Your.
Research Project 2e is the ultimate companion to successfully completing your research project. Warm and pragmatic, it gives you the skills and the confidence needed to succeed no matter what happens along the way. The book guides you through every step of your research project, from getting started to analysing data and writing up. Each stage is clearly set out, highlighting best practice and providing practical tips and down-to-earth advice for actually doing research. Key features include: Fully developed companion website including podcasts, worksheets, examples of real projects and links to journal articles Chapter summaries Boxed definitions of key terms Full glossary Suggestions for further reading Bursting with real world examples and multidisciplinary case studies, this book addresses the key questions posed by anyone hoping to complete a research project. It is the must-have textbook every student needs. Available with Perusall—an eBook that makes it easier to prepare for class Perusall is an award-winning eBook platform featuring social annotation tools that allow students and instructors to collaboratively mark up and discuss their SAGE textbook. Backed by research and supported by technological innovations developed at Harvard University, this process of learning through collaborative annotation keeps your students engaged and makes teaching easier and more effective. Learn more.

Food Science and Technology: A Series of Monographs: Food Texture and Viscosity: Concept and Measurement focuses on the texture and viscosity of food and how these properties are measured. The publication first elaborates on texture, viscosity, and food, body-texture interactions, and principles of objective texture measurement. Topics include area and volume measuring instruments, chemical analysis, multiple variable instruments, soothing effect of mastication, reasons for masticating food, rheology and texture, and the rate of compression between the teeth. The book then examines the practice of objective texture measurement and viscosity and consistency, including the general equation for viscosity, methods for measuring viscosity, factors affecting viscosity, tensile testers, distance measuring measurements, and shear testing. The manuscript takes a look at the selection of a suitable test procedure and sensory methods of texture and viscosity measurement. Discussions focus on nonoral methods of sensory measurement; correlations between subjective and objective measurements; variations on the texture profile technique; and importance of sensory evaluation. The publication is a vital source of information for food experts and researchers interested in food texture and viscosity.

The sensory properties of foods are the most important reason people eat the foods they eat. What those properties are and how we best measure those properties are critical to understanding food and eating behavior. Appearance, flavor, texture, and even the sounds of food can impart a desire to eat or cause us to dismiss the food as unappetizing, stale, or even inappropriate from a cultural standpoint. This Special Issue focuses on how sensory properties are measured, the specific sensory properties of various foods, and consumer behavior related to which properties might be most important in certain situations and how consumers use sensory attributes to make decisions about what they will eat. This Special Issue contains both research papers and review articles. This edition examines the philosophical, historical and methodological foundations of psychological testing, assessment and measurement, while helping students appreciate their benefits and pitfalls in practice. The United States Social Security Administration (SSA) administers two disability programs: Social Security Disability Insurance (SSDI), for disabled individuals, and their dependent family members, who have worked and
contributed to the Social Security trust funds, and Supplemental Security Income (SSI), which is a means-tested program based on income and financial assets for adults aged 65 years or older and disabled adults and children. Both programs require that claimants have a disability and meet specific medical criteria in order to qualify for benefits. SSA establishes the presence of a medically-determined impairment in individuals with mental disorders other than intellectual disability through the use of standard diagnostic criteria, which include symptoms and signs. These impairments are established largely on reports of signs and symptoms of impairment and functional limitation. Psychological Testing in the Service of Disability Determination considers the use of psychological tests in evaluating disability claims submitted to the SSA. This report critically reviews selected psychological tests, including symptom validity tests, that could contribute to SSA disability determinations. The report discusses the possible uses of such tests and their contribution to disability determinations.

Psychological Testing in the Service of Disability Determination discusses testing norms, qualifications for administration of tests, administration of tests, and reporting results. The recommendations of this report will help SSA improve the consistency and accuracy of disability determination in certain cases. We experience our environment in a unique way through our senses. Some people thrive in a busy environment with lots going on and many people involved. They like everything brighter, louder, hotter, faster and find these inputs enjoyable and stimulating. Others avoid a crowded, noisy environment and will escape to ordered tranquility whenever they can. They prefer everything softer, milder, slower and quickly feel overwhelmed and irritated by too much fuss and flutter. Sensory intelligence explains in clear layman's terms how this works to help you understand why you and others respond to sensory input the way you do. It then tells you how to modulate your senses to adapt to your environment and other people, or change your environment to fit your sensory preferences. It will help you to function more effectively and give you greater understanding and adaptability within your relationships, both at home and at work. 

Sensory testing and measurement are the main functions of sensory analysis. In recent years, the sensory and consumer field has evolved to include both difference testing and similarity testing, and new sensory discrimination methods such as the tetrads have received more attention in the literature. This second edition of Sensory Discrimination Tests and Measurements is updated throughout and responds to these changes and includes: A wide range of sensory measurements: Measurements of sensory effect ($d'$, $R$-index and $Gini$-index); Measurements of performance of trained sensory panel (Intraclass correlation coefficients and Cronbach’s coefficient alpha); Measurements of relative importance of correlated sensory and consumer attributes (drivers of consumer liking or purchase intent); Measurements of consumer emotions and psychographics; Measurements of time-intensity; Measurements of sensory thresholds; Measurements of sensory risk with negative sensory effects (Benchmark Dose, BMD, methodology) Measurements of sensory shelf life (SSL). A balanced introduction of sensory discrimination tests including
difference tests and similarity tests. Bayesian approach to sensory discrimination tests. Modified and multiple-sample discrimination tests. Replicated discrimination tests using the beta-binomial (BB), corrected beta-binomial (CBB), and Dirichlet-multinomial (DM) models. Sensory discrimination methods including the tetrads and the ‘M+N’. R and S-Plus codes for all the measurements and tests introduced in the book. Mainly intended for researchers and practitioners in the sensory and consumer field, the book is a useful reference for modern sensory analysis and consumer research, especially for sensometrics.

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