

Discrimination Testing in Sensory Science

A Practical Handbook

Edited by Lauren Rogers

Discrimination Testing in Sensory Science: A Practical Handbook is a one-stop-shop for practical advice and guidance on performing and analyzing discrimination tests in sensory science.

This book covers all aspects of discrimination testing: the history and origin of the methods; the practicalities of setting up discrimination tests; dealing with replications; the statistics behind each test; action standards, analysis and decision-making; as well as a look into the future of sensory discrimination testing. There is a special chapter on the statistical analysis of results, making it easy to use the open-source programming language R. Easy access to the R code as well as other useful downloads for working with sensory discrimination tests will be available from, <http://www.laurenrogers.com/discrimination-testing-in-sensory-science.html>.

Written by sensory science experts from both academia and industry and edited by an independent sensory scientist with more than 20 years of experience in the planning, running, and analyzing of discrimination tests, *Discrimination Testing in Sensory Science* is an essential text for academics in sensory and consumer science, as well as panel leaders and sensory scientists working in research, new product development, or quality control, in both food, home and personal care products.

About the Editor

Lauren Rogers is an independent sensory science consultant based in the UK with more than 20 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 also the ASTM Sensory Evaluation Committee (E18).



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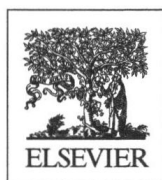
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This book is dedicated to Eric and André.

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Preface

The main reason for writing this book was to give more detail for each of the sensory discrimination methods than would normally be found in a standard sensory text book. I had been very interested in finding out more about the origin of the various discrimination tests and how they all compared, and that started the ball rolling. I also wanted to provide a more detailed reference for the statistical analysis of data from discrimination tests, and two chapters (Chapters 2 and 15) complement each other in this regard, and the various method chapters (Chapters 5 to 14) give case studies that give examples of the analyses in action.

While pulling together all the various chapters for this book, it was interesting to see how different people and different companies do things in different ways, especially in the statistical analysis and interpretation of the results for similarity testing. Chapter 2 gives an excellent account of the use of discrimination tests for similarity testing, and there is a really interesting and useful way to deal with testing for similarity in Chapter 15. If your discrimination tests are pretty much all about making sure there is no difference between your products, I can recommend that you read the relevant parts of both chapters before reading more about the specific methods. Using R for the analysis of your data, really is as simple as copying and pasting the script provided on my website, <http://www.laurenrogers.com/discrimination-testing-in-sensory-science.html>. At first glance it may appear rather daunting but RStudio is actually quite easy to use!

Writing the history chapter for this book gave me the opportunity to see how the various discrimination tests developed over time and this was incredibly interesting and enlightening. It also made me realize that there is an infinite number of tests available to us and that there is no magic associated with the triangle test. It will be really interesting to see sensory scientists trying out different discrimination tests, chosen to meet the requirements of the decision-making process, as opposed to relying on the company's method of choice for each and every decision. I hope the detailed method chapters written by the various authors in this book, as well as the useful information given in Chapters 3 and 4, will help you in your choice of test for each individual project that requires a discrimination test and that you will enjoy trialing new approaches. Do write and tell me all about it!

Acknowledgments

I am extremely grateful to all the authors who have contributed to this book; I could not have done it without you! The book is definitely a team effort. Thank you for all your contributions, ideas, and hard work in pulling together the various chapters.

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