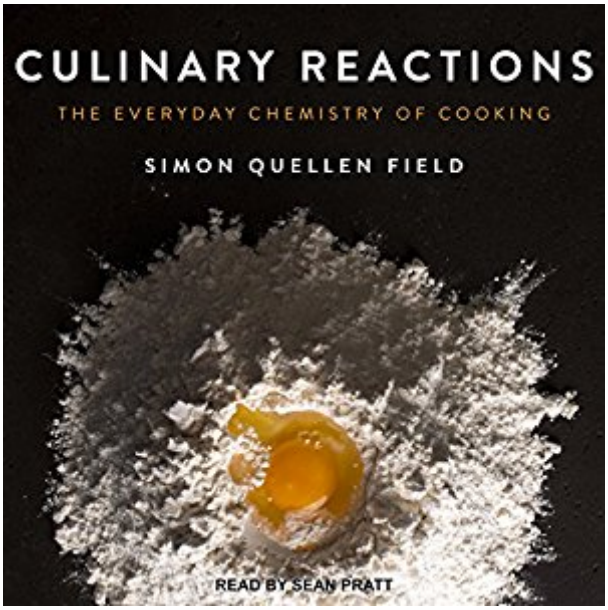
Culinary Reactions: The Everyday Chemistry Of Cooking



Synopsis

When you’re cooking, you’re a chemist! Every time you follow or modify a recipe you are experimenting with acids and bases, emulsions and suspensions, gels and foams. In your kitchen you denature proteins, crystallize compounds, react enzymes with substrates, and nurture desired microbial life while suppressing harmful microbes. And unlike in a laboratory, you can eat your experiments to verify your hypotheses. In Culinary Reactions, author Simon Quellen Field explores the chemistry behind the recipes you follow every day. How does altering the ratio of flour, sugar, yeast, salt, butter, and water affect how high bread rises? Why is whipped cream made with nitrous oxide rather than the more common carbon dioxide? And why does Hollandaise sauce fall for "clarified" butter? This easy-to-follow primer even includes recipes to demonstrate the concepts being discussed, including Whipped Creamsicle Topping (a foam), Cherry Dream Cheese (a protein gel), and Lemonade with Chameleon Eggs (an acid indicator). It even shows you how to extract DNA from a Halloween pumpkin. You’ll never look at your graduated cylinders, Bunsen burners, and beakers the same way again.

Book Information

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Customer Reviews

As other reviewers have indicated, this loose assembly of topics needs better organization to make the science clear. This is very obvious in the chapters on foams, emulsions, colloids, gels, and suspensions. Providing scaffolding such as a table summarizing the various types of colloids would have made the distinctions readily apparent. An even more troubling problem occurs on pages 11

and 12, where the chemistry behind beating egg whites in copper bowls and with acid or cream of tartar is, quite frankly, incorrect. That being said, there is some interesting information here, and a couple of the recipes look like fun: DNA from Your Halloween Pumpkin and Chameleon Eggs in 7-UP stand out. I'm not sure that's enough to justify purchasing this book, however.

I never took chemistry in high school or college; therefore, I only can a very cursory understanding of chemistry. I am writing a book "A Guide for Beginning and Managing a Low Sodium Lifestyle" and have a chapter on modifying recipes. This book is a God-send for me to better understand what is happening when you cook ingredients. It is now a primary reference for checking out what will happen when changing specific recipe ingredients, heating them, etc. It is well written for the chemistry uninitiated and I was impressed by the structure of the book. It will facilitate re-finding information that I have already read when I need to reference that information. I did not have to re-read many parts to understand them and that was mostly my lack of knowledge of even basic chemistry.

This book is not poorly written and does contain knowledge worth learning. The problem I had with the book is I had already purchased and read "the science and Lore of the kitchen" written by Harold McGee. I had found that Harold McGee's book was more detailed and covered a vast amount of knowledge. When I compared both books I felt like Culinary Reactions was kind of like attending a second grade class but you already graduate from high school, I found myself asking, why am I reading this? I can recommend this book to someone who is interested in obtaining the basics of food science. But if you are looking for more than I recommend "the science and Lore of the kitchen" written by Harold McGee.

This book comes off as a write up of Google searches. It contains lots of interesting factiods, to be sure, and on the whole is worth the price, but it's neither a chemistry course nor a cooking course nor -- what you'd hope for -- a braiding of the two.It's not a biochem course, not even a lightweight one, as it doesn't build from first principals -- it just throws out whatever chemistry facts happen to pop up, some times at a basic level and sometimes at a very deep level -- too deep, I'd think, for most cooks. Neither is it a cooking/baking course (it mixes both), as again it doesn't build up an understanding from basic principals. So you get a chemistry fact, sometimes paired with a curious fact about cooking or baking. Then off to the next fact. Fortunately, it has a table of contents and a good index, so at least you can find the tidbits you might be looking for. Many times they are

interesting, but not always.My degrees are in chemistry and I consider myself reasonable well read when it comes to gastronomy, so I enjoyed the book and read it completely. But I think if I were someone expecting to be lead through an understanding of basic food chemistry and simultaneously basic cooking/baking I would have been confused and disappointed. You'd come away with some facts, but I don't think you'd come away with an understanding of the chemistry of cooking or baking, and I don't think you'd become a better cook (or chemist).

We just moved and have a big beautiful new kitchen - we wanted to get more into the art of cooking and flavors and what item brings out the best flavor in our culinary creations. Love this book and the way it guides you through kitchen and flavors.

I BOUGHT THIS AND I ONLY USED MY JUDGMENT TO BUY IT FROM ITS PHOTO COVER AND TITLE. i WILL READ IT AT THE RIGHT TIME. I HAVE PURCHASED SO MANY BOOKS ALREADY AND CONTINUE TO. PRACTICUM HAND IN HAND WITH TESTED PRINCIPLES

Culinary Reactions is somewhat simplistic. I would recommend it for young cooks in middle or early high school. The style of writing is simple and the information provided is presented very simply. Both my daughter and I read it. She has a college degree in a social science--no chemistry. I have a degree in chemistry. We both found the style of writing and method of presentation to be very simple, ideals for beginning cooks who are teens.The concepts and method of presentation by the author are at the level I would use for EYH programs. (EYH is a program to interest middle school students in science).I bought this book to give to my brother who is not a chemist. I'm glad I had it sent to me before it went to him. I would be embarrassed to send this book to an adultIf this book were listed for teens, not adults, I would recommend it. As an adult book the style of writing and information is too simplistic.

Highly recommended for cooks, bakers and culinary creators of all ages. The sooner you learn this the longer you'll reap the benefits from knowing it. Great art builds on basic science. These well written and easily understood explanations will build the knowledge you need to go from guessing to creating.

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