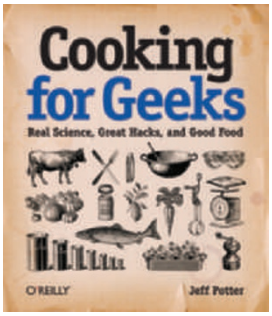
Kitchen hacks for better cooking



Cooking for Geeks

by Jeff Potter

O'REILLY MEDIA: 2010. 432PP. $34.99

For a book about food this is a rather unusual read. The author, Jeff Potter, a software engineer by background, states in the preface that the goal of the book is to "point out new ways of thinking about the tools" that are found in the kitchen. It's not a book you'll pick up for its recipes, even though the 100+ included are fine. And it's not a book you would notice for mouth-watering photographs of food. It is, however, one that could trigger a lifelong interest in cooking among those who are scientifically minded. Where an experienced chef can read between the lines of a recipe, the rest of us can turn to books such as *Cooking for Geeks* to get hints on how to turn a recipe into a tasty dish.

The book is filled with advice ranging from the obvious (when straining pasta, pour the boiling water away from you) to the interesting and brilliant, such as the best way of cracking an egg. My experience from working in a shared lab is that you can learn a lot from observing how your colleagues work. A kitchen is not too different from a lab and Potter has done a good job capturing small, trivial and 'obvious' details — the tricks of the trade. For an inexperienced cook the 'obvious' is often the best place to start, and it's a good thing that Potter dares to include this kind of advice.

Following tips on culinary tools and gadgets, how to pick a recipe, how to organize the kitchen and how to calibrate equipment, the book focuses on the basics of flavour. But where many science books leave it at descriptive text about taste and smell, Potter goes on to propose experiments to try out in the kitchen. And his systematic and analytical mind shines through when he lists typical bitter, salty, sour, sweet, umami and spicy ingredients from different regional cuisines.

The chapter that may have the greatest potential of improving your cooking covers time, temperature and methods. Depending on the meat used, the denaturation of proteins occurs at different temperatures. That's why it's important to know the temperature at which you are cooking. Combine this with different methods of heat transfer (conduction, convection, radiation) and varying rates of such transfer in foods, and you're left with a complex set of equations to solve to obtain a steak with a nicely browned surface, an outer layer that is not overcooked and a core with the desired doneness. Luckily there are easy ways to achieve this, and the book includes an introduction to *sous vide* cooking and the hardware needed for this. Using temperature-controlled water baths (not unlike the ones used in chemistry labs), meat is sealed in plastic bags and cooked at the desired core temperature, thereby avoiding heat gradients altogether. For better flavour, a quick browning is recommended to get the Maillard reaction going.

The chapter 'Playing with chemicals' may frighten the average consumer, but certainly warms the heart of the chemist, who is well aware of the many pure chemicals and polymers found in the kitchen. Sugar, salt, acids and bases are well known, hydrocolloids perhaps less so. But they are even more fun to play around with. Ranging from the better known starch and gelatine to more exotic gelling agents such as agar, carrageenan and sodium alginate to mention a few, Potter explains the science and gives practical tips on how to succeed with the recipes.

Inbetween the many fact boxes, recipes and tables there are also more than 20 interviews with scientists, food professionals and bloggers to be found. Again, not very common for a cook book, but it fits in nicely with all the other bits of information. At this point I should also mention (in the interest of full disclosure) that as a food blogger I was one of the lucky people to be interviewed for the book.

Jeff Potter is a computer scientist and makes no attempt to hide this in the book, for instance when he wants to 'overclock' an oven to make a perfect pizza. The book is strewn with 'hacker lingo', and what some may term a good sense of humour others may frown at as geeky jokes and unnecessary references to software engineering. In my opinion the book could have reached an even greater audience without the references to computer science. Apart from this, my main objection against the book is the lack of colour photos and the minuscule size of the black-and-white photos. Some of the pictures are available in colour and high resolution through www.flickr.com, and Potter also encourages users to post pictures tagged with 'cookingforgeeks' onto the same site.

Despite these objections, it is a well-researched book, and the wide range of topics and number of fun facts, hacks and tips is amazing. Jeff Potter succeeds in bringing popular food science to a broad audience, and I'm convinced that the book could even find its place in science education and as a source of inspiration for science projects. It also encourages a work methodology that is familiar to every chemist: experiment and observation. This is obvious in the lab, but just as useful in the kitchen. And in case you're still curious about the eggs: crack them on a flat surface. This will result in larger pieces that aren't pushed into the egg. Since I read this tip I've tried it several times and it works very well!

REVIEWED BY MARTIN LERSCH

Based in Norway, organic chemist Martin Lersch blogs about food and chemistry at Khymos (http://blog.khymos.org) alongside his day job in R&D at a biorefinery.