

## Preface

The impetus behind Candy Bites is the candy course taught at the University of Wisconsin-Madison. Every summer since 1963, when the course was initiated in conjunction with the National Confectioner's Association, candy technologists in companies around the world have congregated in Madison for several weeks to learn about candy. From hard candy to chocolate, they learn about ingredients, formulations, and manufacturing methods from experts in the field. They then come down to the candy lab and make numerous batches to understand how formulation and processing conditions influence the quality attributes of each candy.

For example, in the caramel lab, small groups of students make about 15 different caramel varieties. Some use sweetened condensed milk while others use powdered milk, some use butter while others use vegetable fat, and some cook to 238 °F while others cook to 260 °F. At the end, the instructor provides input and evaluation on how and why the observed differences come about.

This long-standing expertise in candy science is also available to the undergraduate Food Science majors at UW-Madison through a senior elective course, Candy Science. From understanding how the boiling point elevation curve influences moisture content in sugar confections, to how the principles of glass transition and the state diagram allow control over candy quality, to controlling the polymorphic crystallization of cocoa butter during tempering of chocolate, the students learn to apply scientific principles to candy making. In this way, candy making becomes more of a science than an art (see Chap. 3).

In this book, we've teamed up to provide a unique product. Most of the chapters were written by Dr. Rich, a Professor of Food Science and lead instructor for both candy courses, with input from AnnaKate, who has degrees in English and Writing. A few chapters were written by AnnaKate, which are indicated as such in the text. It was written so that people with all levels of science education and expertise can enjoy this book. We hope you enjoy learning a little science along with trivia, history, and social insights related to candy

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Candy Bites

The Science of Sweets

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2014, XIV, 269 p., Softcover

ISBN: 978-1-4614-9382-2