A Practical Guide to Chocolate Aeration

Each aeration method gives unique product characteristics and processing challenges.

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Incorporating bubbles into foods is not a new technology. Generations upon generations of people have developed methods of adding air bubbles into any number of foods, including beer, bread, cake, ice cream, marshmallow, popcorn and soft drinks, just to name a few. In each case, the bubbles play a significant role in the final texture, appearance and overall appeal.

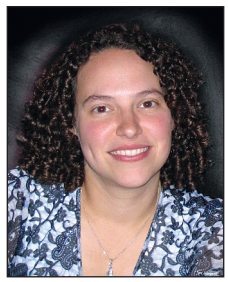
Since the 1930s there have also been significant efforts to add bubbles to chocolate to impart interesting texture, appearance and sensations. As a medium for aeration, chocolate has the distinction of being relatively stable after cooling. The gas leaves a permanent change on the cooled chocolate that can surprise and delight its consumer. Today, the food manufacturer's challenge is to understand and control this impact.

Efforts to incorporate bubbles into chocolate have resulted in numerous well-known aerated chocolate brands, each with unique textures and characteristics. Nestle's *Aero* bar has been perhaps the most well-known throughout the past several decades, sporting large, playful bubbles. Cadbury's *Wispa*, in contrast, delivers much smaller bubbles and a softer, fudgy texture. *Milka Luflee*, *Laima Aerated Chocolate* bars, *Lotte Airs* and more recently, Hershey's *Air Delight* also demonstrate the wide variety of aerated chocolate products from which consumers can choose. Some examples are pictured in Figure 1.

Throughout the past 80 years, there have been numerous methods employed to aerate chocolate. This paper will describe the practical considerations of the widely used

Some Aerated Chocolate Bars

Figure 1



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