

The Art and Science of Ganache

Proper choice of ingredients and manufacturing method are necessary to create a ganache with the desired characteristics.

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According to Peter Greweling (2007), "there is a dearth of studies on how ganache functions as a system," despite "its importance in the confectionery world." He further recommended that the scientific community perform quantitative investigations to help better understand "this beloved center." In that spirit, we present a combination of the art and science of ganache.

In the traditional sense, ganache is made by mixing chocolate with cream to make a soft confection, often used as a filling in truffles. Ganache may also be piped for decorations or whipped as a topping. Additional ingredients may be added to enhance texture, flavor and shelf stability. These include corn syrup or honey, various ingredients to enhance flavor, alcohol, fruit purees and butter. These ingredients alter the microstructure of the ganache and thereby moderate texture. For example, butter is often added to ganache to soften it and enhance the creamy texture. Since the shelf life of fresh cream ganache is often considered to be only two to three weeks, other ingredients may be added to extend shelf life.

Part of the appeal of ganache is its soft, creamy, smooth, almost silky texture, particularly when used in contrast with a harder chocolate shell in a truffle. Because of the soft and creamy texture, ganache has rapid flavor release, dispersing the flavors of both the chocolate and other added flavorants. Traditional ganache enhances the flavor nuances of the chocolate used in ganache production. Many chocolatiers match the flavor of the chocolate with the flavors used in the ganache to make unique and delectable products.

Some use the term *ganache* to describe a meltaway center, made by mixing vegetable fats with added chocolate. The eutectic softening effect between the fats results in a more spreadable chocolate texture somewhat similar to traditional ganache. Here, we focus on traditional dairy-based ganache products and explore the effects of various compositional changes on the microstructure and texture of the finished product.

GANACHE PREPARATION AND USE

There are many methods to make ganache, all of which will have great flavor and texture, but one must use consistent procedures to have a consistent texture. Greweling (2007) demonstrates four different approaches, showing pictorially the results for each approach. Most (but not all) of the nonchocolate portion of the ganache (generally cream, but may also include evaporated milk, corn syrup, invert syrup, etc.) usually starts with a scalding step (180°–190°F). This acts to pasteurize the liquid portion to