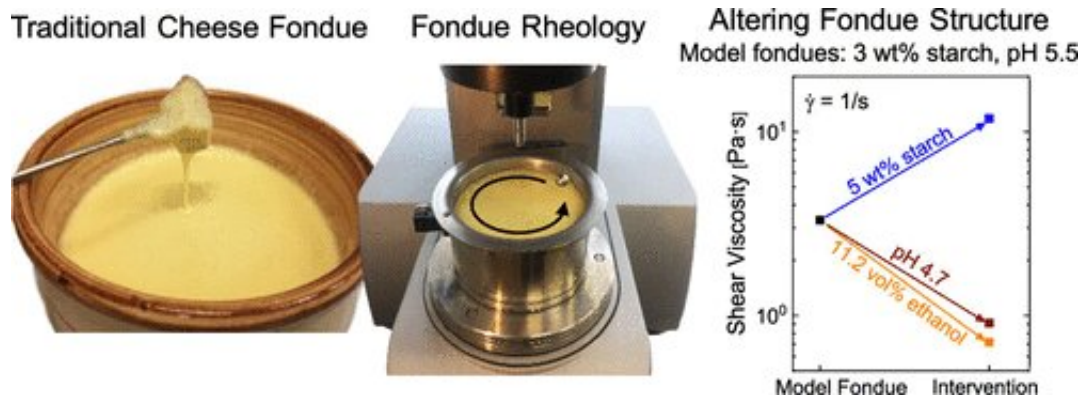


A scientific method for perfect fondue

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Credit: American Chemical Society

Cheese fondue is an icon of Swiss cuisine and a dinner party staple. While it may seem like a simple dish, getting the texture right can be a challenge for optimal mouthfeel, dipping and flavor release. This requires the perfect balance of cheese, wine and starch. Now, researchers reporting in *ACS Omega* reveal how to use these key ingredients to produce deliciously melted fondue.

Once a fad of the 1970s, fondue has made a resurgence in recent years. And on a cold winter night, there's nothing better than dipping a piece of bread into warm, gooey cheese. But that's only part of the picture. Traditional versions also include wine and seasonings, as well as starch for cohesion. Chemically speaking, fondue is a multiphase system of colloids that require just the right inputs to achieve cheesy perfection. One wrong move could leave the preparer with an unappetizing bowl of

separated [cheese](#) solids and oils. So, to gain further insight into the flow of fondue, Pascal Bertsch, Laura Savorani and Peter Fischer wanted to assess the effect of starch and wine on the dish.

The researchers started with equal amounts of two traditional fondue cheeses—Gruyère and Vacherin—in water. The addition of a potato starch slurry prevented irreversible separation of the dish. To mimic the effects of [wine](#), they added a mixture of water and ethanol. This decreased the viscosity of the fondue, which is required for optimal mouthfeel and dipping coverage. They also incorporated acid to study the effect of lowering the pH, and this generally had the effect of lowering the fondue's viscosity. The researchers also explored alternative thickening agents. Less carrageenan and xanthan gum were required compared to the amount of potato [starch](#) needed, but it was carrageenan that provided the creamiest results. Overall, the study shows that a few minor tweaks can result in cheesy perfection every time the fondue pot is brought out.

More information: Pascal Bertsch et al. Rheology of Swiss Cheese Fondue, *ACS Omega* (2019). [DOI: 10.1021/acsomega.8b02424](https://doi.org/10.1021/acsomega.8b02424)

Provided by American Chemical Society

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