

## Juice Balls: The Science of Spherification

Did you know that you can turn just about any drink or pureed food into small spheres? The spheres have a gelatinous outside with a liquid center. **Molecular gastronomy** is the area of food science that explores how to make these spheres, as well as other ways ingredients in our food are physically and chemically changed when we prepare and cook it. In other words, molecular gastronomy looks at the *molecules* in our food and how they change. (*Gastronomy* is the study of picking, preparing, and eating good food.) The molecular gastronomy technique that is used to make food into spheres has a fitting name: **spherification**. Figure 1 shows spheres (balls) that have been made out of green tea using spherification.

In this food science project, you will investigate how changing the pH of an acidic food, by adding sodium citrate, affects the ability of the food to undergo spherification. What do you think will be the right pH for turning foods into the best spheres? Will it depend on the food used? Do you think you will be able to turn all of the foods into spheres? Get ready to do some tasty tests to find out!



### References

Accessed June 10, 2016. <[http://www.sciencebuddies.org/science-fair-projects/project\\_ideas/FoodSci\\_p074.shtml#background](http://www.sciencebuddies.org/science-fair-projects/project_ideas/FoodSci_p074.shtml#background)>