

This experiment looks at how egg white ( albumen ) is transformed as it is whisked. Egg white is about 2/3 of the total weight of an egg, and is 10% protein, the rest being mostly water. To demonstrate the change in the egg white we are going to discover **how to make meringue**!

**MERINGUE RECIPE**

**What you need:**

* A bowl
* A whisk
* Baking sheet
* 4 egg whites
* 225g caster sugar

You can use less eggs as long as you use about 55g of caster sugar per egg white.

**INSTRUCTIONS FOR MAKING MERINGUE**

* Pre-heat the oven to 140 degrees, gas mark 1.
* Line 2 baking sheets with parchment
* Put the egg whites in a bowl and whisk slowly at first then faster as they expand. Once you get stiff peaks the egg whites are ready.
* Add the sugar slowly a few tablespoons at a time and whisk after each sugar addition.
* Place 2 heaped tablespoons of mixture onto the baking parchment, leave a gap and then repeat until all your mixture is used up.
* Place in the oven on a low shelf for about 45 minutes. Then turn the oven off, but leave the meringues inside for a further 15 minutes.
* Serve with whipped cream and fruit.

For more fun try making [meringue towers](https://www.science-sparks.com/meringue-towers/), how high can you build them before they topple?

**THE SCIENCE BEHIND MERINGUE**

When we whisk egg white, two things happen:

* The whisk creates a force through the egg white which unfolds the protein molecules.
* The whisking also causes air bubbles to be trapped in the unfolded proteins which makes a foam.
* When baked the foam hardens into meringue! How cool is that?