

### The scenario

<b>Subject</b>	<b>Biochemistry/Protein denaturation</b>
<b>Length</b>	4:07
<b>Main objectives</b>	To show how prepare a fried egg at ambient temperature
<b>Detailed objectives</b>	
<b>Structure and description of experiments:</b>	
<b>1. Introduction</b>	Description: The motivation for the experiment will be the investigation of the effect of placing an egg with an alcohol at ambient temperature
<b>2. Main subject</b>	Description: Did you know that you can cook an egg without heat? Why does an egg change colour when you add alcohol to it?
<b>Part 1</b>	
<b>Experiment 1 (0:44)</b>	<p><b>(0:40), Tools:</b> Plate, one egg, ethanol</p> <p><b>Description:</b> Crack the egg and place it on the plate. then add ethanol and wait for about an hour to observe changes.</p> <p>You will observe that the white part of the egg suffers some changes that are like those obtained when you fry the egg, due to the protein denaturation that, in this case, is caused by the alcohol and not by the heat.</p> <p>Depending on the percentage of alcohol, the reaction takes at least an hour.</p> <p>The egg yolk contains some proteins that are denatured by the alcohol in the same way as heat, by breaking the bonds that hold parts of the protein in a folded shape.</p> <p><b>Questions:</b> What is in the egg that is not affected by alcohol? - a lot of fat</p> <p><b>Conclusions:</b> The alcohol participates in a chemical reaction, denaturing the conformation of the protein molecules so they can form new linkages with each other.</p>
<b>3. Summary, evaluation and notes</b>	<p><b>Application:</b> When you cook eggs and meat, the digestion, and the use of alcohol for disinfection.</p> <p><b>Level:</b> primary school (ISCED 2 / 6th, 8th grade)</p>