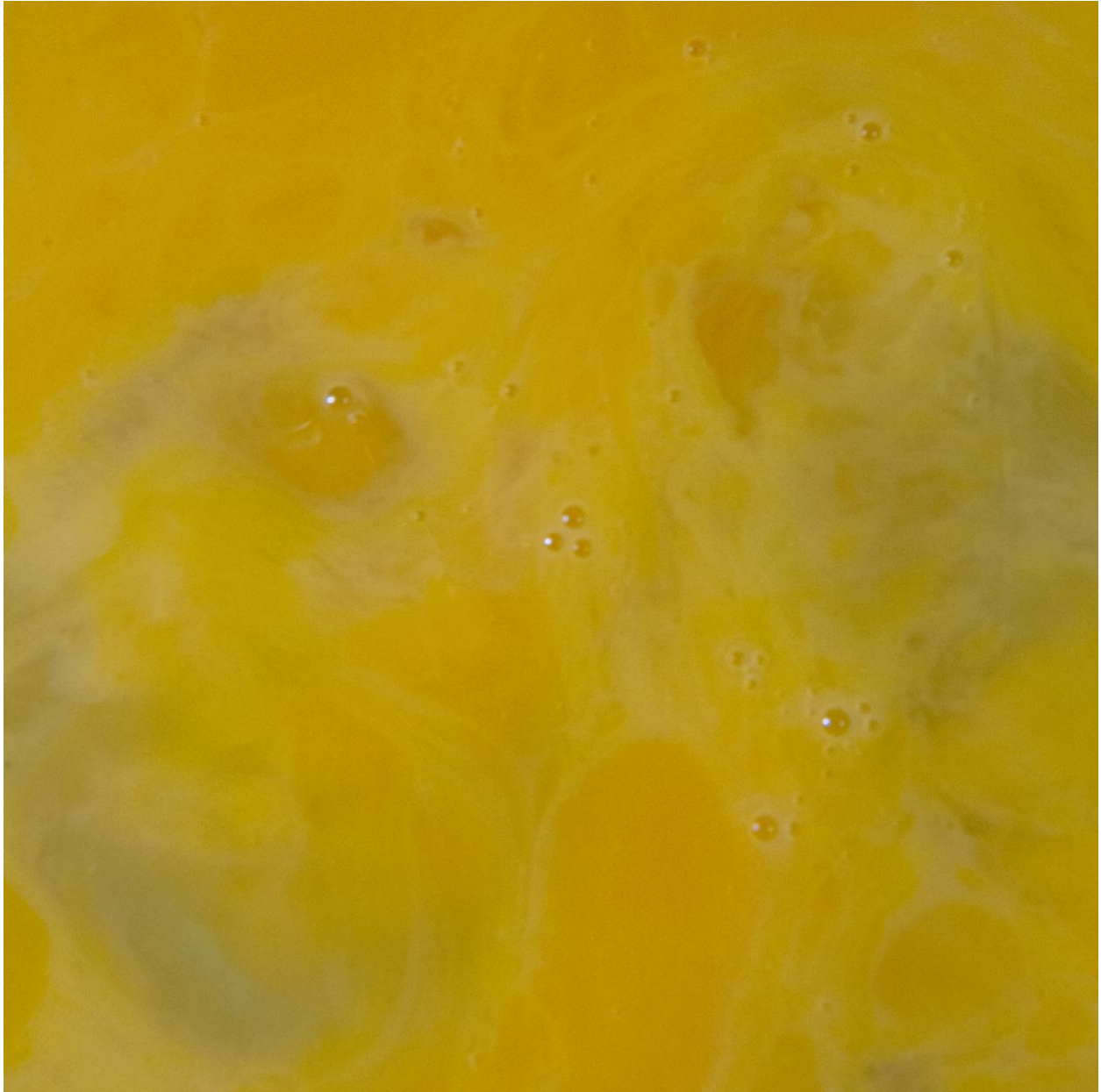


MCEN 4151-001

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IV 1 Report

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The picture shows the flow inside the egg mixed with a little bit of water. The intention of the photo is to study and show how the white part of the egg mixed with yellow part. It is nice to see the boundary lines between the white and yellow parts and study them.

It is interesting to see what inside the eggs clearly to do that, you need three eggs and a little bit of water. One or two eggs are not enough because the eggs will provide enough details, and the water has been used to make the color of the eggs lighter.

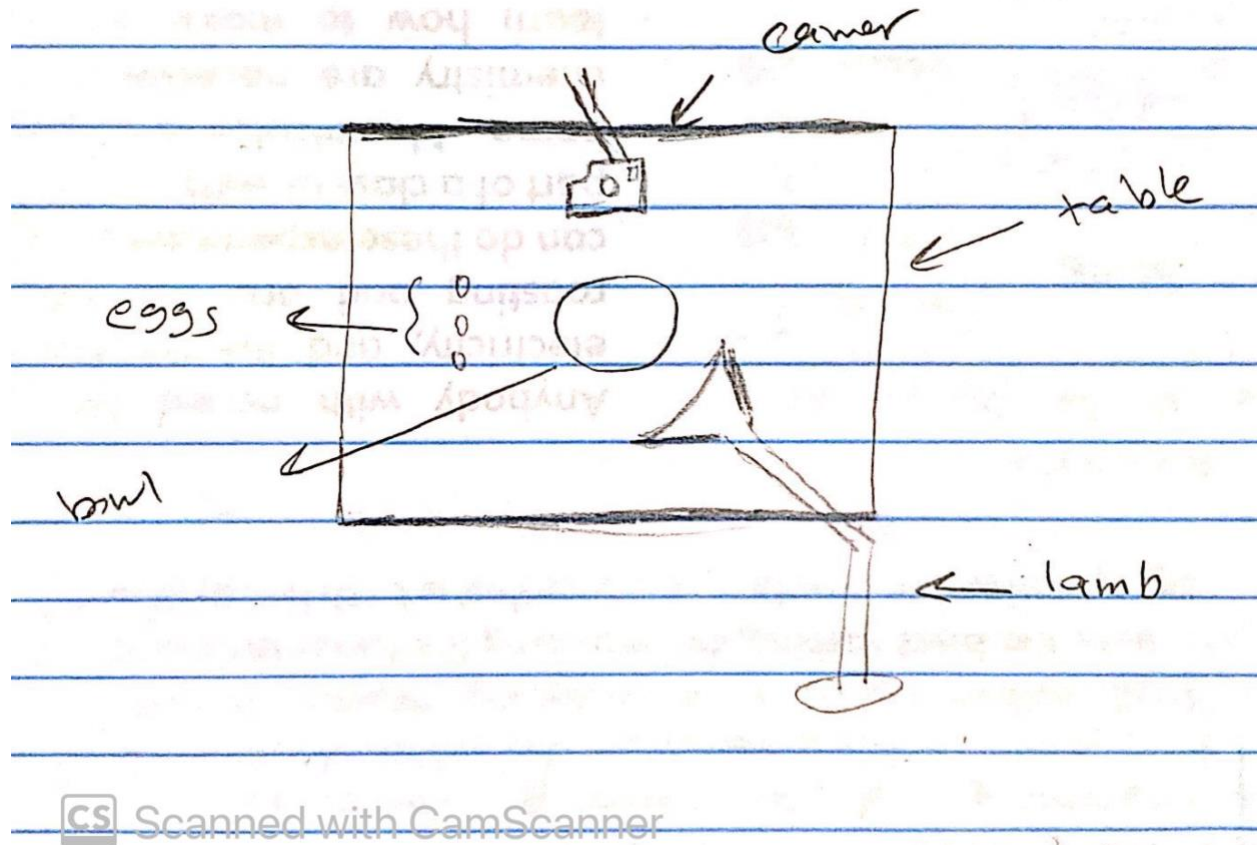


Fig.1 sketch for the setup

It obvious that the eggs in steady state, so it is a laminar flow. We can also figure that out form *equation 1*

$$Re = \frac{\rho u L}{\mu} \quad \text{Equation 1}$$

From the experiment in one of the reaches, we can say Re is equal to 2,888. [1]

Which mean it is laminar flow. The forces on the eggs are normal force and gravity.

The set up of the picture was a bowl on a table, and three eggs inside it. The water has been used to make the color lighter. From one side there was a desk lamp with 60W. the photo was taken by 18-105mm Nikon lens. The camera has an auto focused. The photo has been editing by lightroom. The editing was only to make the photo brighter, so the details can be clear in the picture. The size of the field of view was about 2ft wide and 1.5ft high. The original picture dimension is 5184x3456, and the setting was ISO.

I really like the result of this photo. I like the details in this photo and how the boundaries are clear, and bubble of the photo also clear. Although it is a sample idea, but it is good to study something we almost eat it every day. I think changing the background into black will be helpful. Also, having a good light source could help too. What I could do different is try a milk instead of water and see what happen. In short, I think this is a good picture.

Reference:

[1] Vojtěch Kumbár, J. S. (2015, Jun). *Fluid dynamics of liquid egg products*. Retrieved from PMC: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4456492/>