Methods

Chicken samples are ICS Type A1 acquired from US Union Farm, which is of steady quality[8] and can be found in most supermarkets. 10 kilograms of chicken chest meat was equally divided into two portions, one cooked in Dundee’s method[2] for comparison and the other part cooked in our novel way as following:

Firstly, the chicken meat was cut into pieces of 5cm×5cm×1cm, using a 31cm china knife of Akei®. Then the meat was fully soaked into the the mixture of 200ml soy sauce and 50ml olive oil for twenty minutes, while keeping environment temperature at 25℃. Partly based on the method of cooking potatoes demonstrated by Oliver et al.[9], we brushed the Sydero® oven by olive oil well-proportionedly and heated it to 120℃, prepared to heat the meat. Right after that, the meat was placed on the oven and heated to 180℃, lasting 20 minutes. During the last minute, 50g spice and 100g salt, from ertin® food company, was evenly spread on the meat.

The test of flavour was carried out by a team of 20 cooks and 20 experienced chicken lovers (the full list is attached at the end of the article). They were separated randomly into two groups, and each person would have 100g chicken cooked in Dundee’s method and 100g chicken cooked in our novel way. One group tasted Dundee’s chicken first, while the other initially tasted our cuisine, so as to avoid the influence of tasting sequence. Then each person gave his/her score on the flavour, from 0-10, and we derived the result using a paired-sample t test.

As for bacteria examination, we cooperated with Dim National Microorganism Laboratory. The remained 2kg chicken sample, half cooked in our new way and half in Dundee’s method, was sent to the lab. The samples were tested for several common pathogenic bacteria in the Standard Procedure[10].

1. Dundee, S. P. , Adebiyi, A. A., & Kok, J. F.. Using salt to make chicken better. *Science Advances.***6**(15), 9507-9507(2008).
2. James, H.. The analyse of chicken from different farms. *Food and Cuisine*,**4**(1), 1-8(2021).
3. Oliver, W., Hamilton, J., Dayan, U., Amit, R., & Enzel, Y.. The heating procedure of cooking potatoes. *Vegetable Cuisine*, **24**, 39-52 (2017).
4. Crimson, G., White, F., & Gwen. Y. . The standard procedure of bacteria detection on food. *Food and Biology*, **15**(11), 878-884 (2014).