

Preparation of Powdered Egg Yolk

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Abstract

Egg is an excellent source of high quality of protein of which is yolk contains 44% and egg contains 56%. The dried egg powder can be stored and transported without refrigeration at room temperature. The product is quite stable and contains enough shelf life. This product can replace the use of fresh egg and also in bakery product (cakes, ice-creams, cookies, doughnuts and sauces, etc).

I. INTRODUCTION

The advantage of this product is its improved emulsifying abilities compared to standard egg yolk powder. It is also a heat stable product. It remains same even after microbiological safety and reduced volume. Yolk contains vitamins and minerals and all of egg fats and cholesterol and about one half of protein. It also acts as a good emulsifier. Yolk is yellow in colour this is due to presence of lutein and zeaxanthin. Egg is one of the few foods that naturally contain vitamin D. It also consist of all fat soluble vitamins (A, D, E, & K). The egg yolk powder has good property like bonding with some other constituents which is not easily mixed or bonded.

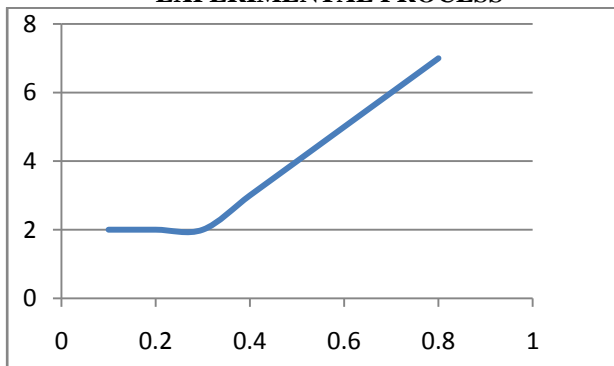
II. MATERIALS AND METHODS

White eggs were purchased in single lot at local market. The amount of protein was evaluated by lab method as procedure described by SHEETAL LABORATORIES, PUNE.

III. EXPERIMENTAL

Initially, we took egg yolk in a vessel. Then we kept it in Constant temperature bath at temp 65 degree temperature. Time required for this process is nearly 5 to 7 mins. Still it contains little moisture. For extraction of moisture we allow it to remain in furnace for nearly 20 mins at 80 degree temp. The product formed is quite dry enough and normally yellow in colour.

IV. GRAPHICAL REPRESENTATION OF EXPERIMENTAL PROCESS



- Above mention graph is :
% solidification of liquid yolk v/s Time in min.

Note:

Graph or parabolic curve is imaginary graph. It is just drawn on the basis of observation while heating of liquid yolk under constant temperature (65 degree temp.)

- While heating the liquid yolk under the constant temperature, the obtained graph is parabolic in nature. After 5 to 7 minutes, liquid yolk converts into semi-solid material containing moisture with oily appearance.

V. RESULTS AND DISCUSSION

Constituents	Powder obtained by spray drier method and Pasteurised	Our product
1. pH	6.0-7.0	6.0-7.0
2. Protein	30%	34.5%
3. Fat	51%	52.79%
4. Colour	Normal Yellow	Normal Yellow
5. Carbohydrates	3.5%	3.52%
6. Ash	12.5%	4.35%

VI. CONCLUSION

Our finding contains more protein and nutritive material than product available by different method. The less **ash content** indicates that it contains less impurities in the product which is good to health and also increases shelf life. Hence, we conclude that by this method of producing egg yolk powder, we get it as good emulsifying agent.

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