

# MAKING QUARK

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## ABSTRACT

Quark cottage cheese and similar varieties of white acid-set cheese can be produced from milk. In this research as one of the International Young Naturalists' Tournament, IYNT 2018 problems, this process has been investigated experimentally and the properties of the resulting product were studied too.

## ARTICLE INFO

Team Work and winner of Bronze Medal in

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## 1 Introduction

According to the main approach : observation, experiment, comparing data and conclusion we are going to investigate this problem.

Cheese as a food derived from milk is produced in a wide range of flavors textures and forms by coagulation of the milk protein casein. During production the milk is usually acidified and adding the enzyme rennet causes coagulation.

Eating high- fat cheese can help to improve our health by raising the high density lipoprotein (HDL). Low fat cheese has a lower fat which contains at least 25% less fat than its regular counterpart.

Quark Cheese as a traditional creamy cheese is common and popular in German-speaking & Eastern European countries which is often translated to cottage cheese and junket but it is unknown in Asian countries. The traditional one is made without rennet.

## 2 Experiments

Quark cheese as it was seen under microscope has not a porous texture (Fig. 1).

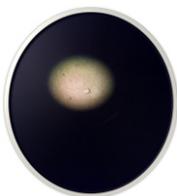


Fig. 1: Quark Cheese under microscope

The recipe to make quark cheese:

4 cups milk , 1/2 teaspoons yoghurt , 1/4 rennet

. Boil the milk on the pan till it had a skin on it

. Let the milk cool to room temperature

. Add the yoghurt

. Stir them & wait they rest at room temperature for 6 hours

. Add the solved rennet

. Stir them in a separated barrel

. Wait for 4 hours

. Layer a strainer with a cotton towel and allow it drains for 7 hours (Fig. 2).



Fig. 2: Quark cheese is made in our experiment

## 3 Results

In comparison with other cheese we found its thickness under several weights (Fig. 3).

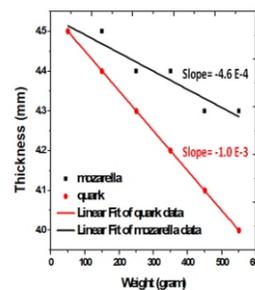
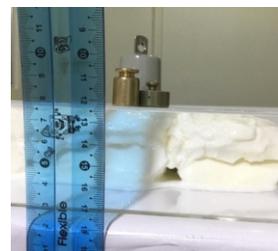


Fig. 3: Comparison between Quark cheese and Mozzarella cheese

Quark contains dramatically less salt than cottage cheese and Ricotta and it has high protein also . Full – fat quark is a great source of vitamin K<sub>2</sub> which helps to maintain bone strength and protect our arteries from block ages . So in the long term consumption it does not make any problem .

Cultures for cheese making are called lactic acid bacteria (LAB) because their primary source of energy is the

lactose in milk and their primary metabolic product is lactic acid that there is a wide variety of bacterial cultures available distinct flavor.

#### 4 Conclusion

Quark is a creamy cheese so it doesn't have a porous texture. It has more benefits than other cheese. Per 100 grams quark contains :

protein 14.1 gr  
Sugar 3.5 gr  
fat 10.6 gr  
saturated fat 7 gr  
sodium 81 mg  
Energy 690 KJ  
calcium 100-130 mg

#### References

- [1] [www.dietvsdisease.org](http://www.dietvsdisease.org)
- [2] [www.cheftayebeh.ir](http://www.cheftayebeh.ir)
- [3] [www.thespruce.com](http://www.thespruce.com)