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 $\boldsymbol{\tau}$ ashkaval cheese is one of the most popular semi-hard cheeses in the Balkan Kashkaval cheese is one of the most population Kashkaval cheese during ripening caused by coliform bacteria (Escherichia coli - early blown curd), spore-forming anaerobic bacteria (Clostridium tyrobutiricum late blown curd with gas holes followed by a sweet and butyric acid taste), or molds (Oidium crustacea or *Oidium sulfurea* - red or yellowish rind). This study aimed to develop a new type of cheese, Kashkaval cheese flavored with thyme essential oil, with an enhanced microbiological stability at ripening. Thyme essential oil is among the top 10 essential oils due to its antimicrobial, antifungal and antioxidant demonstrated effects. Studies show that thymol and carvacrol, its main constituents, are responsible for these effects. Therefore the antimicrobial potential of thyme

essential oil in controlling the growth of E. coli, Cl. tyrobutiricum and molds was evaluated under *in situ* conditions. The study also investigated the effect of thyme

essential oil on Staphylococcus aureus and lactic acid bacteria. The absence of E. coli, Cl. tyrobutiricum spores, and S. aureus in both control and treated Kashkaval

cheese samples demonstrates that the heat treatment of milk was effective. Results

also show that thyme essential inhibited the growth of molds on the surface of

## Influence of thyme essential oil on microbiological stability of kashkaval cheese during ripening



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## **Biography**

Maria-Ioana Socaci has graduated from UASVM Cluj-Napoca with an MSc degree in Food Processing and Quality Control (2017) and BSc degree in Food Control and Expertise (2015). She is active in Food Science research. The output of her research work has rewarded as follows: 1st prize at 7th International Conference for Students "Student in Bucovina" Suceava: Nov 10 - 11 for the paperwork "Chemical composition and antioxidant activity of some plant essential oils"; 2nd prize at "7th International Conference for Students "Student in Bucovina" Suceava: Nov 10 - 11 for the paperwork "In vitro antibacterial activity of some essential oils extracted from herbs"; 3rd mention at 14th Student Scientific Session, Apr 21 2016, USAMV Cluj-Napoca for the paperwork "Caracterizarea unor uleiuri esențiale extrase din plante aromatice"; From 2015 to 2017 she was Volunteer in Food Microbiology Laboratory of Food Science and Technology Faculty USAMV Cluj-Napoca, guided by Assoc. Prof. Ancuta Rotar and Assistant Professor Carmen Pop and Animal Food Quality Control Laboratory of Food Science and Technology Faculty USAMV Cluj-Napoca, guided by Assoc. Prof. Cristina Semeniuc.

Kashkaval cheese but also lactic acid bacteria.

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