

## MILK CLOTTING PROPERTIES OF LIQENASI GOAT, MILK SYNERESIS KINETICS AND RECOVERY OF PROTEIN AND CASEIN ON CURD

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### Abstract

Along with wide range of biodiversity richness including both animal and plant species the Prespa area reflects long history of coexistence even through local domesticated traditional animal races. The focus of this study is the local goat. Previous studies shows that content of protein, casein and fat as well as coagulation properties of milk were influenced from genetically factors, lactation period, growth conditions, seasonal factors, etc. On the other hand curd syneresis, a critical step in cheese making, directly influences the quality of cheese. The aim of this study was to evaluate milk coagulation capacity, syneresis and protein recovery on curd of Albanian Liqenasi goats breed milk and characterization of the herd for animal selection with good coagulation properties.

25 samples of Liqenasi goat breed milk belonging to the same herd were collected during medium lactation phase (June, 2015), from Prespa Lake region. Milk samples were analyzed for physical and chemical properties (acidity, casein content, protein, fat, lactose and non-fat solids method), for coagulation parameters such as R (clotting time in minutes), curd firmness measured in volt after 20 minutes (A20) or 30 minutes (A30) and the rate of firming K20 (in minutes) as well as syneresis process on incubation temperature 25, 30 and 35 °C, at pH 6.3 for whole and skimmed milk. The balance protein was conducted according to the conservation mass law.

The results showed that the clotting time R(min.) was similar for all the samples. Based on the results taken from optigraph device, A20 and A30 parameters showed high variability. 20 % of milk samples showed good coagulation capacity, 30 % medium coagulation capacity and 50 % low coagulation properties. Regarding the firmness rate (K20), 38 % of samples didn't reach standard curd firmness (hardness) suitable for cutting. Protein and casein recovery on curd result to be higher on incubation temperature of 25 °C for whole milk, while for skimmed milk it results to be higher on incubation temperature of 30 °C.

The analyses of milk clotting properties of Liqenasi goat shows particularities of the race that appeals for conservation measures and further promotion.

**Key words:** *Liqenasi goats breed, Milk clotting properties, Syneresis, Protein recovery.*