fatty acids, texture and flavor sensory profiles and other characteristics. Although cheese making technologies are similar, results shows differences between this two hard argentine cheese very well accepted by consumers in our country or abroad.

Keywords: Reggianito cheese, Goya cheese, origin, characterization,

Characterization of Milk and Cheese from an Argentine Ewe Breed

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Pampinta breed was developed locally in 1990 for meat and milk purposes in extensive operation by backcrossing local Corriedale (25 %) ewes with East Friesian (75 %) ewes. The result was an animal well adapted to pampas region, huge, without any wool in faces and foots, without horns, high milk production and non fatty flesh.
Milk from lactating Pampinta ewes grown at INTA Anguil Station was studied during a period of 1 year taking monthly samples. Raw milk average composition was 6.72 % total proteins, 5.03 % casein, 7.44 % fat, 4.72 % lactose monohydrate and 19.18 % dry matter. At the beginning of the lactation period DM represented more than 25 %. Mineral composition, freezing point, pH, casein as well as free fatty acid, total fatty acids profiles and cholesterol content was determined.
Semi hard cheese was elaborated 4 times during the year. Three replicates of each batch were analyzed. 10 cm diameter and 6 cm high cylindrical cheeses weighing 400 g presented a natural color and resistant rind covered with paraffin and packaged in a vacuum plastic film. Average composition was 36.9 % of moisture, 51.2 % fat in DM, 108 mg of cholesterol 100 g^{-1}; 15.5 % of total proteins.
Sensorial evaluation of texture and flavor was determined on a 1-7 scale with a trained panel from INTI. Results are: Elasticity: 3.4 ± 1.0; firmness: 2.6 ± 0.4; deformability: 3.1 ± 0.6; friability: 3.1 ± 0.9; adhesivity: 3.4 ± 0.2; crystals: only in some samples; solubility 4.4 ± 0.5; moisture impression: 3.5 ± 0.8. Sensorial evaluation of flavor shows the following results: Intensity of odor: 3.9 ± 0.8; intensity of aroma: 2.6 ± 0.2; sweet: 0; salted: 3.6 ± 0.3; sour: 1.9 ± 0.2; bitter: 2.5 ± 1.2; pungent: 1.8 ± 0.8.
After 17 years of selection, nowadays there are more than 20000 animals distributed in about 40 dairies along Argentina, and the semi-hard cheese is well accepted among local consumers.

Keywords: Pampinta, milk, cheese, characterization

Influence of Genetic Polymorphism and Technological Parameters on Proteolytic and Aromatic Profile of Goat *Cacioricotta* Cheese

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In cheese-making of typical Italian cheeses, goat milk from different autochthonous Italian breed is mainly employed alone or in mixture to ovine or cow milk. It is known the renneting behaviour of goat milk is strictly related to casein amount, which is controlled by quantitative class of α_{s1} alleles present in bulk milk and associated with high, intermediate or reduced level of α_{s1} (strong, intermediate or weak alleles). These alleles in turn determine the technological "fate" of goat milk, transformed in pressed (strong alleles) or fresh cheeses (weak alleles) by lactic fermentation as well

as drinking milk (weak alleles). Moreover, the α_{s1} level expressed, associated to different genotypes, seems to be inversely relate to "goat odours" intensity in obtained cheese.
The main objective of this work is the valorisation of goat *Cilentana* breed, reared in Southern Italy, aimed at its biodiversity safeguard by derived dairy products characterisation. For this scope, two typical *Cacioricotta* cheese productions, obtained from two bulk milks containing strong or weak goat α_{s1}–CN variants, respectively, are carried out with the same technological process, except for the coagulant agent (*mucor pusillus* or kid rennet paste). Furthermore, the determination of proteolytic and aromatic profiles of final products is respectively carried out by means of immuno-electrophoresis techniques coupled to mass spectrometry and GC/MS analysis.
The results can be summarized as follows:
- the proteolytic cheese profile is depending both on α_{s1}–CN genotype and coagulant agent (microbic or paste rennet);
- the volatiles free fatty acids (FFA) composition of *Cacioricotta* cheese only seems to depend on coagulant type, while terpenes composition, on pasture composition, as expected.

Keywords: α_{s1}–CN genotype, goat cheese, 2D electrophoresis, mass spectrometry, GC/MS

Proteomic Approach to Define Authenticity of Typical *Pasta Filata* Cheeses

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Italian bovine *pasta filata* cheeses, such as *Caciocavallo* or *Provolone* and well known *Caciocavallo Silano*, are the most typical cheeses produced in Southern Italy; whereas, the production of *Provolone Valpadana* is spread in Northern Italy, namely in "*Pianura Padana*". The main steps of cheese-making process are consisting of: i) use of goat or lamb paste rennet as coagulant agent; ii) long time of curd acidification under whey, so that it can gain the stretching aptitude. In 1996 the PDO mark was assigned to *Provolone Valpadana* and *Caciocavallo Silano* cheeses, whose productions were strictly linked to Lombardia, Veneto, Emilia Romagna, Trentino, in Northern Italy and Calabria, Campania, Molise, Basilicata and Puglia in Southern Italy. Apart from bovine breeds, the two products are differing both in form and weight of cheese, which in turn determine their minimal ripening time, 30 or 90 days, for lower or higher size, respectively.
The aim of this work is to identify molecular markers either of geographical origin or cheese-making process by using a proteomic approach. The insoluble nitrogen fractions at pH 4.6 of *Provolone Valpadana* and *Caciocavallo Silano* cheeses are analysed combining 2D electrophoresis with mass spectrometry.
The obtained results indicate that geographical origin of *Caciocavallo Silano* and *Provolone Padano* cheese can be discriminated on the basis of rare alleles B and C at β-CN *locus*, respectively. Actually, the rare β-CN B variant is more frequent in individual bovine milk of *Podolica* breed, reared in Southern Italy, than the rare β-CN C variant mainly occurred in French breed. Finally, a very similar peptide composition and the same α_{s1} fragments, derived by specific chymosin action, are obtained from the same technological procedure.

Keywords: 2D electrophoresis, mass spectrometry, proteome cheese

Genetic Biodiversity of Mesophilic Lactobacilli from Fiore Sardo PDO Cheese

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