

395. Effect of pasteurization, electric pulse and high pressure treatments on colostrum IgG concentration.

Castro, N.¹, Sobrino-López, A.², Martín-Belloso, O.², Trujillo, A.³, Guamis, B.³, Capote, J.* , Morales-delaNuez, A.¹, Argüello, A.¹

¹Department of Animal Science, Las Palmas de Gran Canaria University, Arucas 35413, Spain, ²Department of Food Technology, University of Lleida, 25198 Lleida, Spain, ⁴Canary Agronomic Science Institute, La Laguna, Tenerife, Spain., ³Centre Especial de Recerca Planta de Tecnologia dels Aliments (CERPTA), CeRTA, XiT, Departament de Ciència Animal i dels Aliments, Facultat de Veterinària, Universitat Autònoma de Barcelona, 08193 Bellaterra (Spain)

Two experiments were performed in order to study the effect of different higienization methods on colostrum IgG concentration. In the first one, caprine colostrums (6 batches) were subjected to heat (56°C for 60 min and 63°C for 30 min) and high pressure (400 and 500 MPa for 10 min at 20°C) treatments and analyses of IgG denaturation was performed using radial immunodiffusion. All treatments assayed produced a reduction in colostrum IgG concentration (27.53, 23.58, 23.33, 22.09, and 17.06 mg/ml for raw, heat-treated at 56°C for 60 min or 63°C for 30 min, and pressure-treated at 400 and 500 MPa, respectively), but differences were only observed between raw colostrums and those pressure treated at 500 MPa. In the second one, caprine colostrums serum (10 batches) were subjected to heat (56°C for 60 min and 63°C for 30 min) and electric pulses (100, 300 and 1000 µS) treatments and analyses of IgG denaturation was performed using ELISA. All treatments assayed produced a reduction in colostrum IgG concentration (38.95, 34.30, 22.21, 9.97, 7.89 and 6.18 mg/ml for raw, heat-treated at 56°C for 60 min or 63°C for 30 min, and electric pulse treated at 100, 300 and 1000 µS, respectively), but differences were only observed between raw or heated treatment and those electric pulse treated.