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Goat cheese whey: Immunoglobulins quality and Chitotriosidase activity during 90 days after partum

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It is well known that immunoglobulins are proteins which pass to the whey after cheese-making. Colostrum gradually changes further to become mature milk, which is called transitional milk. The objective of this study was to analyze the evolution of immunoglobulin contents in goat cheese whey samples from partum to a 90-days period. Goat colostrum and milk samples were collected from the farm of Universidad de Las Palmas de Gran Canaria (Las Palmas, Spain) at partum and 1, 2, 3, 4, 5, 15, 30, 60 and 90 days after partum from 10 Majorera dairy goats. 5 mL of milk was poured in a glass test tube and maintained in a 30°C water bath, and then 100 µL of freshly prepared chymosin at 1 mg/ml was added. The resultant whey was collected and assayed for IgG, IgM, IgA, and Chitotriosidase (ChT) activity. Statistical analyses were performed using SAS package. Colostrum at day 0 did not clot and no cheese whey samples were recovered at this time. ChT activity in whey ranged from 1,175 at day 1 to 167 nmol/mL/h, at the end of the experiment. Colostrum ChT activity decreased continuously as time passed. IgG colostrum concentration was the highest at partum and then it dropped fastly. The evolution of IgM and IgA was similar to that describe previously for IgG. The stabilization of IgG, IgM and ChT activity was reached after 15 days, while IgA equilibrium was reached at d 5 after partum. In conclusion, cheese whey is richer than milk in immunoglobulins, and its use for dairy industry must be supervised to avoid the possible interferences in the production due to immunological components.