

**FULL CHARACTERIZATION OF BOVINE  
COLOSTRUM, RAW MATERIAL FOR DIETARY  
SUPPLEMENTS. HIS BENEFICIAL EFFECT ON THE  
HUMAN IMMUNE SYSTEM**

— research paper —

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**Abstract:** Colostrum is the first substance that is produced by the mammary gland (pre-milk), following the birth of the newborn. Having a special composition compared with any other food, this product may represent an irreplaceable support the immune system. The most important components of these foods are the immune factors, growth factors and protective proteins that helps the newborn to survive. For characterization of this product, we collected samples of colostrums from Holstein different cattle breeds, first milked after calving. Samples were taken from cattle farms in the area of Transylvania and analyzed in the laboratory of SC Bioef SRL, Alba. Samples were analyzed physic-chemical (parameters: fat, protein, milk solids, etc) and enzymatic immediately after sampling and were frozen for the determination of immunoglobulin and lactoferrin. This bovine colostrum has been transformed to powder using a freeze-drying system. The products is freeze at – 35 Celsius degrees and after that dry at 40 Celsius degrees under low pressure (vacuum) to keep intake the content of immunoglobulin and lactoferrin.

The bovine colostrums is an important source of lactoferin and immunoglobulin that can help the human immune system to fight with the all the potential infection. The amount of lactoferrin and and immunoglobulin IgG is 388.41 mg/l respectively 98.46 mg/ml. Temperature above 60 degrees Celsius degraded the IgG and LF in bovine colostrum.

**Keywords:** immunoglobulin (IgG), lactoferrin, bovine colostrum, freeze-drying system

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