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# Study of Mechanism of Lipolysis Inhibition by Bovine Milk Proteose-Peptone Component 3

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Milk component 3 was an inhibitor of lipoprotein lipase activity responsible for spontaneous lipolysis occurring in milk stored at 4° C. Experiments using a pH-stat apparatus and emulsified tributyrin showed that component 3 inhibited porcine pancreatic lipase. The lipolytic activity was fully restored by addition of sodium taurodeoxycholate and colipase to the emulsion containing component 3. Inhibition did not seem to be the result of a direct interaction between component 3 and the enzyme. Component 3 had a strong adsorption power superior to that of pancreatic lipase, as shown by tensiometric measurements at an *n*-tetradecane-water interface. Lipase inhibition by component 3 could be the consequence of a rapid diffusion and preferential adsorption of component 3 at the oil-water interface provoking an important decrease of interfacial tension and avoiding the adsorption of lipase.

Key Words: lipase • lipolysis inhibition • proteose-peptone • milk

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