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Surfactants including ginseng saponin affect the gastric enzyme-catalyzed hydrolysis

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Abstract Saponin (a surface-active plant component) from ginseng root was extracted to examine its effect on an enzymatic proteolysis system *in vitro.* Commercial surfactants such as sodium deoxycholate, sodium dodecyl sulfate, and Triton X-100 were also employed in the hydrolysis system to compare their effects with that of saponin. Both the tryptic and the peptic digestion of casein were improved as the concentration of ginseng saponin in the system increased. Triton X-100 showed an effect similar to that of ginseng saponin, while sodium dodecyl sulfate and sodium deoxycholate diminished the casein hydrolysis. Circular dichroism spectrum of casein or enzyme was remarkably changed by the addition of ginseng saponin into the protein solution.