

The Improvement of Rumen Fermentation Products Through In-Vitro Supplementation of Mg and Co Minerals

Title	The Improvement of Rumen Fermentation Products Through In-Vitro Supplementation of Mg and Co Minerals
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Abstract	A study has been conducted to examine the effect of Mg and Co supplementation on rumen fermentation products. The study was conducted in an in vitro experiment, applying completely randomized design, 3x3 factorial. The first factor was three levels of Mg (0; 7.5 and 15.0 mM), and three levels of Co (0; 0.03 and 0.06 mM) as the second factor, total 9 treatments each repeated three times, comprising 27 experimental units all together. In vitro incubation lasted for 4 hours. Variables measured were the concentrations of VFA, N-NH ₃ and protein synthesis of microbial rumen. Data were subject to analysis of variance and orthogonal polynomials test. The results showed an interaction effect between Mg and Co on the concentration of VFA, N-NH ₃ and protein synthesis of microbial rumen. The increasing supplementation of Mg at 0.06 mM Co increased VFA concentration; the highest concentration of N-NH ₃ was achieved by rumen fluid supplemented with 15.0 mM of Mg and 0.03 mM of Co. The highest protein synthesis of microbial rumen was achieved by the rumen fluid supplemented with 8.18 mM of Mg with no supplementation of Co.
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