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Effect of Large Dose of Attapulgite on Animal Growth

and Blood Microenvironment

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Abstract. Effect of acute toxicity and chronic toxicity on attapulgite for animal was studied by Kunming mice and SD rats experiment through administering intragastrically with large dose of attapulgite suspension. The results showed that the mice were normal and grew well, and they did not appear death and toxicity symptoms when they received the same amount as 286 times of the adult dose, indicating that attapulgite mineral powders did not contain acute toxicity and administering intragastrically with large dose of attapulgite suspension had no obvious influence on blood environment and normal growth of rats, and attapulgite did not contain chronic toxicity.

1 Introduction

Natural fine clay minerals can be applied in human health, health care and cosmetics due to its unique chain structure, ion exchange and adsorption properties for thousands years^[1,2]. For about half a century, clay minerals can be used for therapeutic drug in the fields of gastrelcoma, diarrhea, recovering gastrointestinal system function, and treating wound and dermatopathy such as dermatitis, canker and bacterial infection etc., and they can also be used extensively for main functional component of cosmetic, medication stuffing and excipient etc. depending on their unique biologic effect with the development of study on the mechanism of the medical health care function about clay minerals^[3,9]. They can also be used especially in the fields of bioengineering, blood purification^[10] and potential hazards evaluation^[11-12].

In recent years, the experiments of clay minerals as feed additives for improving the utilization ratioof the feed protein&nutrient element, ensuring the health standards of pet, livestock, poultry, fish and shrimp, and improving feeding environment indicate that they can extend the food residence time in animal body effectively, improve the microenvironment of the alimentary canal, adsorb various pathogenic factor such as germ, heavy metal ion ammonia and organic ammonia compounds secreted from gastrointestinal tract, equilibrium intestinal tract bacterial flora, and regulate gastrointestinal function. They can also increase the polysaccharide components in the digestive tract mucosa glucoprotein, stabilize mucosa, and improve the quality of eggs^[13].

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