Tea Seed Extract Product for Use in Companion Animal Dermatitis

I. Title of Research: Tea Seed Extract Product for Use in Companion Animal Dermatitis

II. Research Team Members

Department	Name	Position
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III. Development Idea

Taiwan, located in the subtropics, often experiences hot and humid weather, which makes skin diseases in dogs and cats common. There are many causes of dermatitis, and common symptoms include itching, redness, scaling, and hair loss. These symptoms can occur anywhere on the body. Due to the complex symptoms and causes, a professional examination by a veterinarian is necessary for accurate diagnosis. Owners can prevent and alleviate skin problems through proper diet and daily care. The seed residue left after extracting oil from camellia seeds is an agricultural byproduct. Due to its large biomass, research and development have revealed many economic added values.

IV. Technological Competition and Industrial Application

Previous studies have confirmed that camellia seed cake extract contains 8% tea saponins. Tea saponins possess a wide range of pharmacological activities, including antioxidant, hypolipidemic, antibacterial, and antitumor bioactivities. Due to the presence of water-soluble tea saponins, camellia seed cake was primarily used in the production of cleaning products and as a natural pest control agent in agriculture, providing an environmentally friendly approach to pest management. This study focuses on developing skin care products with antioxidant and antibacterial properties for common skin problems in dogs and cats. Canine and feline dermatological diseases are common clinical problems, with approximately 25% of pets seeking veterinary care for skin issues such as erythema, papules, and pustules. The developed products, derived from natural plant extracts, meet market demand. These products not only possess anti-inflammatory, antioxidant, and antibacterial functions but are also rich in various functional components that can reduce skin sensitivity, improve the coat's softness and shine, and enhance the immune system in dogs and cats.

V. Merchandise Statement of Achievement

This product has previously undergone in vitro cell safety testing and in vivo anti-inflammatory and antioxidant efficacy testing in mice. It is currently in the early stages of finished product trials, with clinical skin tests being conducted on dogs and cats. Subsequent product development directions will be adjusted based on user feedback. The results will be applied to develop dosage forms that are convenient for both veterinarians and pet owners.

Fig. 1: Pet skin care gel with tea seed extract.