

## **EFFECTS of VARIOUS PRODUCTION PROCEDURES of PORCINE BLOOD POWDER on the LARVAL DEVELOPMENT and SURVIVAL of CAT FLEAS (SIPHONAPTERA: PULICIDAE)**

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Mass production of cat fleas, *Ctenocephalides felis* (Bouché), in laboratory is required when a large number of individuals must be supplied consecutively for insecticide tests or other biological research. To keep a flea colony in high quality and stable condition, the larval diet must contain sufficient nutrient and be easily produced. In several blood-containing foods that were convenient to purchase in traditional markets in Taiwan, porcine blood curd powder was better than duck blood curd powder, pork blood cake powder, or fresh pork blood powder. In this study the fleas were fed on porcine blood curd powder produced by different procedures, and reared individually to record their developmental duration from eggs to adults, the adult body size, and the number of emerged adults. The optimum temperature range for drying the blood powder during the production procedure was 50-70°C. Larval development delayed 1-2 days when fed with blood powder that was dried in the low temperature (< 50°C) oven. The emerged female adults became smaller when fed larvae with blood powder that was heated in a 85°C oven or dried at room temperature in a fume enclosure. Feeding with blood curd powder in which the particle size was greater than 0.5 mm in diameter was unfavorable for larval development. Thus, screening blood powder with a No. 35 standard strainer is required before using it as a larval diet. Blood powder can be stored for more than 6 months at -18°C, 4°C, and room temperature; there were no significant differences in the development of larvae fed on the blood powder after different storage periods or stored under different temperatures.