

UNIVERSITI TEKNOLOGI MARA

SOLID NON-RINSE ANIMAL SHAMPOO

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ABSTRACT
NON-RINSE ANIMAL SHAMPOO

In this study, non-rinse animal shampoo was formulated into solid powder using spray drying techniques. The morphology, angle of repose, bulk density and tapped density of powder, as well as, the physical appearance, pH, surface tension, viscosity and foaming ability of the rehydrated shampoo were characterized. *In vivo* (skin sensitivity and eye irritation test) were conducted to evaluate the safety of the shampoo while functional test was performed with the aid of microscopic imaging and scanning electron microscopy. Solid non-rinse animal shampoo had generally good powder flow property. Rehydrated shampoo showed no oil-phase separation, low stickiness and quick drying after several lathering. The rehydrated shampoo exhibited mild to none irritation to animal eyes and skin. The washing action of rehydrated shampoo in removing dirt and sebum from animal fur and skin was good and similar to the commercial shampoo capability.

CHAPTER 1

INTRODUCTION

1.1. Background and problem statements

According to “Pet Statistics | ASPCA”, it is impossible to determine population of stray dogs and cats and around twice as many animals enter shelters as strays compared to the number that are relinquished by their owners. Shelters are used to protect these animals, housing and caring for them properly until they can find new homes and it is important to prevent animals from becoming a danger to people and to other animals (Clendening, 2014). Basically, this becomes a big challenge and a marked increase in responsibility of person-in-charge of animal shelter to take care of these helpless animals.

Taking care of stray animals is not easily done. Each of these animals has their own unique behavior while some of them are not very much liking to be touched and approached. This becomes a problem since all animals in the shelter need to be cleaned properly to minimize chances of infection. Poor sanitary animal conditions such as dirty skin, feathers, and fur are good homes for parasites and bacteria which can make animals sick (Fielding, 2009). According to Vanhorn & Clark (2010), bathing is process of using shampoo, conditioner, and water to remove dirt and debris from the skin and hair.

Shampoo therapy potentially is the most effective mode that can be offered for topical treatment. However it is the poorest mode of client compliance. Depending on the size and length of the hair coat of the animal as well as its temperament, the process can be physically difficult, time consuming, and