

ACT

PROJECT NAME (Ingredient Trade Name): ACT-ZS001PS(SILSIL-2)

Active Ingredient Scientific Name: Silver and Zinc coated Silica

Submission Date: APR. 2010

Description of Product: This product is made from silver and zinc which are coated on silica. ACTOSIL has a good effectiveness of antimicrobes. It could be applicable on the cosmetic preservatives, hand sanitizer, antimicrobial aerosols and other industrial materials. We can provide the powder form of the product (ACT-ZS001PS, other name SILSIL-2) and the dispersed type (ACTOSIL GLc or GLx depend on the concentration of ACT-ZS001PS).

1. Supporting Evidence (Efficacy/Functionality):

Provide all supporting literature and research studies, publications, protocols, and analytical assessment.

Please separate data into:

- Mechanism of Action/s (MOA)
 - Silver have been used as a sanitizing and preservatives. This product is made from using silver. The free radical generated from the silver has several mechanisms to eliminate the microorganisms as follows:
 - inactivate the microbial proteins
 - destroy the cell wall (amino acid cystein)
 - give a damage on microbial genes
- *In vitro* bioassay data
 - This product is good for control various microorganisms and the antimicrobial test results are shown as the attached document 1 and 2.
- *In vivo* testing (Laboratory, Animal, and Human Clinical Studies)
- *In vivo* testing
- Clinically tested
 - Provide studies done by Company on the ingredient.
 - Total number of clinical studies completed?
 - Study design? (number of subjects, duration of the study/ies, double-blinded, placebo-controlled, case controlled, etc.)
 - Percent response rate?
 - Dose and delivery form used in the study/ies
- Published or not published, and in which journal/s?
- Recommended Delivery form/s?
 - It could be applicable on all forms of product above 300 cP of the viscosity.
- Recommended dose/s? (mg per day)
- Collaborating Organizations, professors or University Affiliations
- Conclusions from the studies

2. Intellectual Property / Exclusivity

Provide an IP Portfolio summary to include:

- Provide patent information
 - Provisional/non-provisional/PCT/
 - How is the patent unique, compared to competition?
 - The technologies of competitors are based on nano silver but present technology provides the silver and zinc coated silica and the size of particle is 0.1 micrometer. the particle is not able to penetrates into skin because the length of skin cell to cell is 0.75 micrometer. so this product is safe from the danger of nano particles.
 - Number of patents?
 - 2
 - Patent Type? (Process, Application, Combination, Composition, or other)
 - Process, composition and application
- Describe exclusivity options (MLM, all markets, global, etc.)