

Lab Exp.# 040717

**Comparative Bactericidal Activity of Terrasil Skin Repair Ointment
against Competing Brands**

Signing of this document constitutes approval of the procedures and data outlined on the following pages

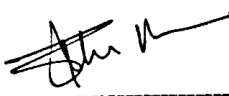
STUDY DIRECTOR:  DATE: 4/7/17
(Bharat Madhavan, Ph.D., Staff Scientist, Research & Development)



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Samples to be tested:

1. Terrasil Skin Repair Ointment (Calendula 1X HPUS, Thuja Occidentalis 6X HPUS)
2. Silver Sulfadiazine Cream (1% Silver Sulfadiazine)
3. Triple Antibiotic Ointment (Bacitracin Zinc:400U, Neomycin: 3.5 mg, Polymyxin B Sulfate: 5000U)
4. Anti-Microbial Silver Non-Staining Gel (Silver 55 PPM)

Organism used:

Staphylococcus aureus 25923

Frequency of test measurement:

0, 60 min

Description of experimental design:

This study is a two-part experiment. The first is a bacterial culture treatment methodology which consists of treatment protocol. The parameters of the protocol were carefully chosen to best elucidate the effectiveness of Terrasil ointment against several competing brands. The second part of the experiment is using a flow cytometer to measure the viable cells accurately.

Material procurement:

1. *Staphylococcus aureus* 25923 was purchased from ATCC (American Type Culture Collection)
2. The SYTO® bacterial count kit and LIVE/DEAD® Viability Kit was obtained from Invitrogen Inc. (Texas, USA).
3. Bacterial culture broths and other microbial supplies were bought from Remel Inc. (New York, USA)
4. The microbial shaking incubator (model 311DS, Labnet Inc.) and Attune Flow cytometer (Invitrogen Inc.) were used for bacterial culture and bacterial assay, respectively.

Methodology:

a. Bacterial culture treatment methodology

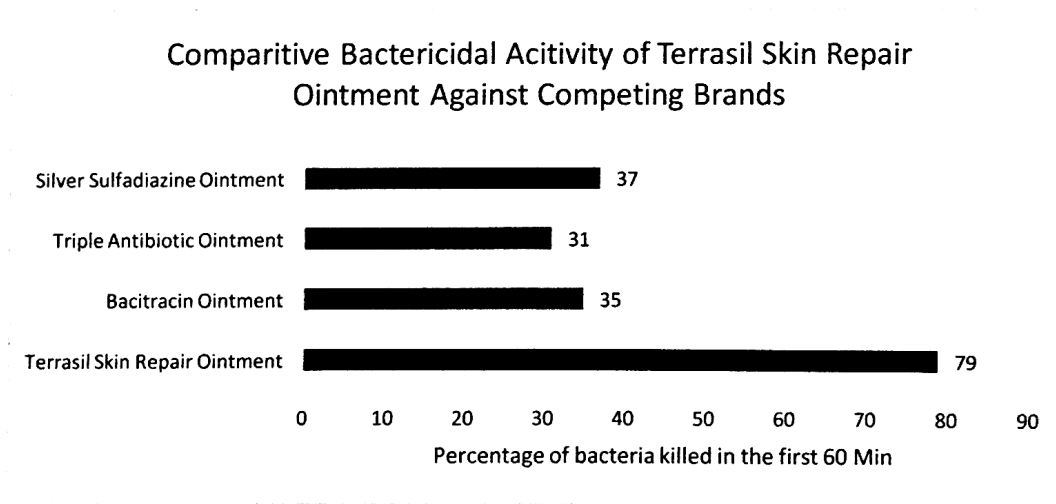
This methodology corresponds to method # AID 1011 in Aidance R&D procedures and is considered proprietary information. Details can be shared upon request

b. Bacterial viability assay

This methodology corresponds to method # AID 1011/A in Aidance R&D procedures and is considered proprietary information. Details can be shared upon request

Results:

In the first 60 minutes, Terrasil Skin Repair Ointment performed significantly better than the average kill rate of competing products





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Record Maintenance and Storage:

All test data that are the result of the experiments and activities of a study necessary for reconstruction and evaluation of the same will be maintained at Aidance Scientific Research Laboratory archives