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(54) **SYNTHETIC ANTIBACTERIAL CLAY COMPOSITIONS AND METHOD OF USING SAME**

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(57) **ABSTRACT**

The present invention is directed to synthetic bactericidal compositions having clay like properties and a method of using these compositions to topically treat bacterially-caused skin infections and skin diseases. The compositions within the scope of the invention compnse a bactericidal effective amount of a reducing agent, such as pyrite, marcasite, pyrrhotite, FeS<sub>2</sub>, FeS, FeS<sub>04</sub>—or other reducing agents having like properties, and a natural clay or clay mineral and/or synthetic clay or clay mineral, or other suitable matenals having clay-like properties. The synthetic bactericidal compositions are synthesized by adding the reducing agent to the clay or clay mineral. It is the presence of the reducing agent in said compositions that renders them bactericidal. The clays serve as a vehicle within which the reducing agent is dispersed, as a diluent to the reducing agent, and also as an adsorbent and low permeability banner in use of the composition

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