Human Safety and The Nanotechnology Utilized by Microsure Antimicrobial Solutions

An overview of Test Results and Clinical Findings

The Purpose of this brief summary is to review the safety of the nanotechnology used by Microsure antimicrobial solutions as it relates to the human body. By using data from numerous research experiments and various clinical trials performed, the effects of Microsure antimicrobial solutions on the skin and rest of the body will be outlined.

Microsure antimicrobial solutions consist of products dedicated to offering the best defense possible when it comes to combating unwanted, harmful Pathogens. The goal is to eliminate damaging microbes in the most successful and rapid manner while also maintaining safety and quality. The continuous integrity of our successful and evolutionary antimicrobial agents is due to the years of dedicated scientific research that utilizes the latest advancements in nanotechnology and understanding the need for a safe yet effective product.

Throughout the years, our company has made it a priority to never stop testing the products we offer and always making sure that our products surpass the required safety rules and regulations set by different organizations. We understand that when applying our products to surfaces, objects or directly onto your skin, there is a need for some sense of assurance and comfort in knowing that you are not bringing harm to yourself or others around you. In order to deliver this sense of safety we made sure to have our products tested throughout distinguished laboratories and in human clinical trials across the world.

In accordance with U.S. Environmental Protection Agency (EPA) Health Effects Test Guidelines, OPPTS 870.2500 and OECD Guidelines for the Testing of Chemicals, we were able to determine what effects if any were witnessed when our solutions encountered skin, eyes, lungs and the oral cavity.

***Please note that the EPA categorizes its toxicity levels from Category I to Category IV, with Category IV indicating the lowest possible level of harm present according to their criteria.*

The following animal tests were performed, and a simplified general summary of each test and the outcomes observed are provided below.

-ACUTE EYE IRRITAION STUDY-

- The solution was administered into one eye of each of the test subjects. The eyes were observed and scored at 1, 24, 48 and 72 hours.

RESULTS:

There was little to no eye irritation reactions present in all the test subjects. Those with minimal irritation showed complete resolution after the first hour of observation.

*Classified as EPA Toxicity **Category IV.**

-ACUTE DERMAL IRRITATION STUDY-

- The solution was applied to identical smooth dermal sites on the test subjects. Indications of any skin reactions were recorded at 4.5, 24, 48 and 72 hours after test substance application.

RESULTS:

There were no skin irritation reactions present in any of the test subjects.

* Classified as EPA Toxicity **Category IV.**

-ACUTE INHALATION TOXICITY STUDY-

The solution was tested for acute inhalation toxicity at a targeted level of air by exposing a total of ten test subjects for a 4-hour period over 14 days.

RESULTS:

The inhalation as colloidal silicon dioxide 2% showed that there was no mortality observed during the observation period.

*Classified as EPA toxicity **Category IV**

-ACUTE ORAL TOXICITY STUDY-

- Per EPA protocol, the solution was administered orally to the test subjects.

RESULTS:

The acute oral LD50 was determined to be greater than 5000 mg/kg body weight. Meaning that the solution met the requirements for an EPA Toxicity **Category IV.**

-SKIN SENSITIZATION STUDY-

- A total of 20 test subjects and different control groups, applications of our solution were placed on the left shoulder and chambers were quickly applied over the application site in order to isolate the area. Additional applications were placed following the same procedure, at weekly intervals. The test subjects were scored for irritation at 24 and 48 hours after initiation of the primary challenge application.

RESULTS:

The incidence and severity of these responses were not significantly greater than those produced by the naive control group indicating that sensitization had not been induced.

Our products were also tested by researchers at The University of Liverpool, where after months on experimentation, experts concluded that the nanotechnology utilized by Microsure were “chemically inert and harmless to humans”. Once again supporting all safety claims previously mentioned.

To correlate the laboratory findings related to product safety on humans we also had physicians perform clinical trials involving the use of Microsure on patients who were known to have non-healing lower extremity wounds and or recurring bacterial infections secondary to these wounds. Each patient had Microsure applied to the affected areas 1-3 times per

week. Patient progress was measured by visual observation as well as the use of FLIR infrared camera to monitor potential healing that the naked eye would normally miss.

The results were astounding, 100% of the patients treated with Microsure benefited from its effects. Patients who had been suffering from chronic severe non-healing wounds were beginning to see signs of healing after only two weeks of trial. Those patients who had less severe wounds also showed signs of healing and in some cases complete resolution of the wound was documented. The physicians concluded that Microsure was not only safe to use on humans but that it also promoted healing, provided protection against infection and was extremely simple to use.

To conclude, based on the numerous results seen with each study it is both apparent and evident that the nanotechnology implemented by our antimicrobial solutions pose no visible threat to the wellbeing or safety of humans. Therefore, defining them 'harmless to humans' as documented by researchers at The University of Liverpool.