# Fentonite<sup>®</sup> Effectiveness Against **Common Wound Pathogens**

## PROTOCOL

The organisms are prepared by inoculating the surface of Soybean-Casein Digest Agar (TSA) incubated at  $32.5 \pm 2.5^{\circ}$ C for 3 days. Following the incubation period, the plates are washed with sterile Serological Saline Solution to harvest the microorganisms used and dilutions with Saline are made, plated on TSA in duplicate, and incubated at 36  $\pm$  1 °C for 42 hours to determine the concentration. The inoculum level is then adjusted to 108 cfu/ mL for use as a stock suspension. Stock suspensions are well mixed and homogenized at inoculation for each organism.

The following microorganisms were used in this Kill Time Study to demonstrate the antimicrobial properties of the Blue clay mixture & Hydrogel Component against common pathogenic organisms: Microbiologies Kwik-Stiks Staphylococcus epidennidis ATCC 35984, Escherichia coli ATCC 25922, Candida albicans ATCC 90028, Methicillin Resistant Staphylococcus aureus ATCC 33591, Streptococcus pyogenes ATCC 19615, Pseudomonas aeruginosa 9027, Klebsiella pneumoniae ATCC 10031, and Clostridioides difficile ATCC 700057.

Using Saline, positive controls are performed by pour plating to enumerate inoculum levels and verify culture purity during testing and Negative controls are performed to establish sterility of media, reagents, and materials used at initiation. Neutralizer Suitability using Dey-Engley Neurtalizing Broth (DEB) is performed concurrently with Kill Time testing to confirm the recovery of < 100 CFU of the test organism in the subculture media in the presence of product.









The Accession# 28532 Rev I indicates a 99.9% log reduction at 12, 24, and 48 hours for Staphylococcus epidemlidis ATCC 35984, Escherichia coli ATCC 25922, Candida albicans ATCC 90028, Methicillin Resistant Staphylococcus aureus ATCC

## **TESTING RESULTS**

	Stap	hylococcus	epidermic	lis ATCC 35	984	Streptococcus pyrogenes ATCC 19615						
Exposure Time	Concentration of Organism cfu/mL		<b>Percent Reduction</b>		Staphylococcus epidermis	Exposure Time	Concentration of Organism cfu/mL		<b>Percent Reduction</b>		Streptococcus pyrogens	
	Control	Product	Control	Product			Control	Product	Control	Product	۰ 	
Time 0	5.8x106	N/A	N/A	N/A	4 P CEUn	Time 0	4.7x106	N/A	N/A	N/A	4 P	
Time 12 hours	N/A	4.1x103	N/A	99.9%			Time 12 hours	N/A	<10	N/A	<b>99.9</b> %	2
Time 24 hours	N/A	<10	N/A	99.9%	• • • • • • • • • • • • • • • • • • •	Time 24 hours	N/A	<10	N/A	99.9%	0	
Time 48 Hours	N/A	<10	N/A	99.9%	Time 0 12 Hours 24 Hours 48 Hours	Time 48 Hours	N/A	<10	N/A	99.9%	Time 0 12 Hours 24 Hours 48 Hours	

		Escherich	nia coli ATC	C 25922		Pseudomonas aeruginosa 9027							
Exposure Time	Concentration of Organism cfu/mL		Percent Reductio		Escherichia coli Exposure Time		Concentration of Organism cfu/mL		<b>Percent Reduction</b>		Pseudomonas aeruginosa		
	Control	Product	Control	Product	ہ۔ بے		Control	Product	Control	Product	ہ میں		
Time 0	7.7x106	N/A	N/A	N/A	6 CFUn	Time 0	5.6x106	N/A	N/A	N/A	4 6		
Time 12 hours	N/A	<10	N/A	99.9%		Time 12 hours	N/A	<10	N/A	99.9%			
Time 24 hours	N/A	<10	N/A	99.9%		Time 24 hours	N/A	<10	N/A	99.9%	0		
Time 48 Hours	N/A	<10	N/A	99.9%	Time 0 12 Hours 24 Hours 48 Hours	Time 48 Hours	N/A	<10	N/A	99.9%	Time 0 12 Hours 24 Hours 48 Hours		
	1 1/ / 1						1 1 / / 1		14// 1				

Candida albicans ATCC 90028							K	ebsiella pn	eumoniae	ATCC 1003	1	
Exposure Time	Concentration of Organism cfu/mL		Percent	Reduction Candida albiancs		<b>Exposure Time</b>	Concentration of Organism cfu/mL		<b>Percent Reduction</b>		Klebsiella pneumonia	
	Control	Product	Control	Product			Control	Product	Control	Product	6 بے	
Time 0	5.9x106	N/A	N/A	N/A	4 GG	Time 0	7.3x106	N/A	N/A	N/A	910 CFUm	
Time 12 hours	N/A	<10	N/A	99.9%		Time 12 hours	N/A	<10	N/A	99.9%		
Time 24 hours	N/A	<10	N/A	99.9%	0 0	Time 24 hours	N/A	<10	N/A	99.9%	J J J J J J J J J J J J J J J J J J J	
Time 48 Hours	N/A	<10	N/A	99.9%	Time 0 12 Hours 24 Hours 48 Hours	Time 48 Hours	N/A	<10	N/A	99.9%	Time 0 12 Hours 24 Hours	

		(Staphyloo ration of			3591				
kposure Time		m cfu/mL	Percent F	Reduction	MRSA				
	Control	Product	Control	Product	ہ۔ تے				
Time 0	6.3x106	N/A	N/A	N/A	4 <sup>4</sup> <sup>6</sup>				
ime 12 hours	N/A	3.0x103	N/A	99.9%	e age				
ime 24 hours	N/A	<10	N/A	99.9%					
ime 48 Hours	N/A	<10	N/A	99.9%	Time 0 12 Hours 24 Hours 48 Hours				

# CONCLUSION

Tested By Alina Aghajanian Microbiologist





**Fentonite**<sup>®</sup> is a rare earth nano-mineral compound that is found in a single remote location. It provides a precise balance of cationic minerals that are embedded in a low pH illite/smectite matrix that effectively traps and deactivates anions, toxins and pathogens. Fentonite effectively chelates and binds toxins in wound exudate and lowers wound pH to create an environment hostile to pathogenic activity.

33591, Streptococcus pyogenes ATCC 19615, Pseudomonas aeruginosa 9027, Klebsiella pneumoniae ATCC 1003, and Clostridioides difficile ATCC 700057.

Approved By Karine Aylozyan QA/Technical Director







### PATHOGEN PROFILE **OF 81 YEAR OLD PATIENT** SUCCESSFULLY TREATED WITH FENTONITE<sup>™</sup>

## **BACTERIAL LOAD**

 $HIGH > 10^{7}$ Serratia marcescens Staphylococcus aureus Acinetobacter baumannii Streptococcus dysgalactiae Corynebacterium striatum

**Laboratory Director** Owatha Tatum PhD, HCLD/CC(ABB), MBA

MicroGen • qPCR + NGS DNA DIAGNOSTICS FOR ACCURATE MICROBIAL IDENTIFICATION

## 8/28/22



9/29/22



## 11/17/22

