Subject: Proposed PicoAg 25B To Replace Bactericides product for testing in house to evaluate.

PicoAG of future products must have these characteristics

1). No Harm for Air (no GWC, ODC, VOHAP or VOC), Soils or Waters

2). Cannot be made of Organic Chemistry, Graphene or Nanotechnology, Just Picotechnology or Physical Chemistry

3). Goals are primary Distribution is as a OTC product.

4). Must be made of Atomic Elements and Not Molecules.

5). Must be able to kill all pests, Be it Bacteria, Fungi, Virus and Insects.

6). Must be able to Deep Clean and Grow Skin

7). Must be able to Penetrate the Shields of all pests.

8). Must be approved at the State and or Federal FDA or better be Exempt

9). Must be safe for Humans, Birds and Animals - Zero Side Effects

Pico Technology LLC

805 Cottage Hill Way, Brandon, FL 33511
800 995-9203, 336 306-0193
Email: donwilshe@biobased.us

"PicoAg 4n1 25B" is a biopesticide and Bacteria, Insects, Fungi, and Virus are controlled! Picotechnology is not taught in any college in the world, Why?

We don't see these buys as Pico competition for last 20 years, The biologicals buying spree by agchem companies large and small swept the industry almost as fast as the spread of weed resistance. Bayer's trendsetting purchase of AgraQuest for nearly $500 million to BASF's $1.02 billion acquisition of Becker Underwood to Monsanto's $300 million investment in Novozymes in their so-called BioAg Alliance.

The US Gov EPA exempts* "PicoAg 4n1 25B" *pesticide registration under its 25B regulations that consists of Zinc, Carbon and Nitrogen! This product also qualifies as a Biopesticide, Biostimulant, Biofertilizer and Biologicals!

As a biopesticide you need a multipurpose mode of action for each elimination of vital elements in Bacteria, Insects, Fungi, and Virus pests you want to control.

Bacteria: elimination of cell membrane and to puncture it and drain proteins and lipid, PH.

Fungi: elimination of the cellulose and chitin.

Viruses: elimination of strands of nucleic acid, either DNA or RNA, and protective protein coat (the capsid), Or a lipid envelope, surrounding the protein.

Insects: elimination or penetration and dissolve lipid cellular membranes, cells desiccation, cellular metabolism, dissolving cuticles, lubrication joints leading to paralysis, stripping the pests protective shields, exoskeleton structure, chitin and protein substances, hydrocarbon chains smothering.

"**PicoAg 4n1 25B**" immediately impacts the exoskeleton structure of the pest upon contact by disrupting the molecular structure of the chitin and other protein substances that protect the insect. This mechanism of action triggers the rapid and irreversible deterioration of the insect's spiracles and tracheal system, resulting in suffocation. "**PicoAg 4n1 25B**" kills insects with elimination of chitin is a polysaccharide, a carbohydrate that has a chain sugar molecules, Chitin is a structure like cellulose. In addition to being found in exoskeletons.

"**PicoAg 4n1 25B**" major benefit of this revolutionary method of insect control is the absence of undesirable side effects on human health and no harm to the ecosystem. Additionally, unlike standard insecticides in use today, no built-in resistance can be developed by the targeted insects, but rather on the respiratory apparatus."

Science suggests that "PicoAg 4n1 25B" can be mechanical in primary sequential steps:
The first step is a direct interaction between the surface and the pests outer membrane, causing the membrane to rupture and leak fluids, proteins and nutrients.

Lastly a few more ways "PicoAg 4n1 25B" electromechanical can affect pests

- There can be a second step related to the holes in the outer membrane, through which the pests lose vital nutrients, protein, water and components, causing a general weakening of the pests.
- Electromechanical in can affect pests by penetration and dissolve lipid cellular membranes.
- This causes cells desiccation to leak water, proteins and nutrients and collapse,
- By interfering with cellular metabolism during metamorphosis,
- By dissolving cuticles the lubrication in the insect’s joints leading to paralysis
- By stripping the pests protective shields (wax, biofilm, etc), rendering it defenseless against subsequent treatment
- The extracts impact the exoskeleton structure of pests upon contact by disrupting the molecular structure of the chitin and other protein substances that protect the insect,
- The extracts have the ability to penetrate complex hydrocarbon chains and disintegrate them,
- The extracts emulsify pests thus stopping their reproduction cycle.
- The change the environment for growth with PH from acidophiles and neutrophiles to alkaliphiles .

After punching holes, how does "PicoAg 4n1 25B" further damage the cell?
Now that the cells main defense has been breached, there is an unopposed stream of "**PicoAg 4n1 25B**" entering the pest cell. This puts several vital processes inside the cell in danger. "**PicoAg 4n1 25B**" literally overwhelms the inside of the cell and obstructs cell metabolism (i.e., the biochemical reactions needed for life). These reactions are accomplished. When "**PicoAg 4n1 25B**" binds to these enzymes, their activity grinds to a halt. Pests can no longer "breathe", "eat", "digest", “reproduce” or “exist”.

How can "PicoAg 4n1 25B" punch holes in a pests?
Every cell's outer membrane, including that of a single cell organism like a pests, is characterized by a stable electrical micro-current. This is often called "transmembrane potential", and is literally, a voltage difference between the inside and the outside of a cell. It is strongly suspected that when a pests comes in contact with a "**PicoAg 4n1 25B**" surface, a short circuiting of the current in the cell membrane can occur. This weakens the membrane and creates holes and leak water, proteins and nutrients.

How can "PicoAg 4n1 25B" effect be so fast, and affect such a wide range of pests?
The experiences observed explain the speed with which pests and other pests perish on "**PicoAg 4n1 25B**" surfaces by the multi-targeted effects. After membrane perforation, can inhibit any given enzyme that "stands in its way," and stop the cell from transporting or digesting nutrients, from repairing its damaged membrane, from breathing or multiplying. Harmless to Environment Air, Water, Soil, Humans, Birds and Animals. This 80 year old science has no side effects or harm on human, birds and animal health. These solutions do not harm mammal cells nor do they attack neurological systems of humans, birds and animals.

How Does "PicoAg 4n1 25B" Puncture And Leak From Membranes?

It is used on lyse cells to extract protein or organelles, or to permeabilize the membranes of living cells.

What is permeabilization of cells?
The organic product dissolve lipids from cell membranes making them permeable to antibodies. Because the organic solvents also coagulate proteins, they can be used to fix and permeabilize cells at the same time. Saponin interacts with membrane cholesterol, selectively removing it and leaving holes in the membrane. Permeabilization is a the process of making something, such as a membrane or cell wall, permeable. Lyse is a verb referring to the process of lysis, the death of a cell. Lysis (/ˈlaɪsɪs/ *LY-sis*; Greek λύσις *lýsis*, "a loosing" from λύειν *lýein*, "to unbind") refers to the breaking down of the membrane of a cell, often by viral, enzymic, or osmotic (that is, "lytic" /ˈlɪtɪk/ *LIT-ək*) mechanisms that compromise its integrity. A fluid containing the contents of lysed cells is called a *lysate*. In molecular biology, biochemistry, and cell biology laboratories, cell cultures may be subjected to lysis in the process of purifying their components, as in protein purification, DNA extraction, RNA extraction, or in purifying organelles.

Trophobiosis Cycle: Pests shun healthy plants. Pesticides weaken plants. Weakened plants open the door to pests and disease. Hence pesticides precipitate pest attack and disease susceptibility, and thus they induce a cycle of further pesticide use.

Here is a suggested list to petri test. I would start since we are killing pesticide and its your lab and not field testing that we use 1 oz per gallon of water. But also have Nova best Bactericides and a control. PicoAg 25B or I might start just calling everything OMNI! Its your private label choice as I plan at least 100 labels for you to sell with the same product but just different dilutions. So 1 oz, ¾ oz, ½ oz and 1/3 oz and ¼ oz. You can fine tune what dilutions work best for each bacteria. Again we are talking 1 formula and different dilution not 50 different formulations. Just give me the worst bacteria you know of and lets do this or not as I love competing.

bacterial Acetobacter Melanogenus Bacteria
bacterial Acinetobacter Bacteria
bacterial Actinomyces israelii Bacteria
bacterial Agrobacterium Bacteria
bacterial Alcaligenes Viscolactis Bacteria
bacterial Alkaligenes Bacteria
bacterial Bacillus anthracis Bacteria
bacterial Bacillus Stearothermophilus Bacteria
bacterial Bacillus subtilis
bacterial Bacillus subtilis Bacteria
bacterial Bordetella pertussis Bacteria
bacterial Candida albicans bacteria (Yeast)
bacterial Canker of tomato
bacterial Cardiobacterium Bacteria
bacterial Chiamydia psittaci Bacteria
bacterial Clavibacter michiganensis subsp. insidiosus (Cmi)
bacterial Clostridium botulinum Bacteria
bacterial Clostridium Perinngens Bacteria
bacterial Clostridium tetani Bacteria
bacterial Corynebacteria diphtheria Bacteria
bacterial Corynebacterium Bacteria
bacterial Coxiella burnetii Bacteria
bacterial Diplococcus Pneumoniae Bacteria
bacterial Erwina Bacteria
bacterial Escherichia Coli Bacteria
bacterial Escherichia coli is a gram-negative bacterium
bacterial Francisella tularensis Bacteria

bacterial Geobacillus stearothermophilus (basonym Bacillus stearothermophilus)
bacterial Goss' wilt and blight of maize/corn
bacterial Gumosis a bacteria
bacterial Haemophilus influenzaeBacteria
bacterial Haemophilus parainfluenzae Bacteria
bacterial Klebsielia pneumoniae Bacteria
bacterial Lactobacillus Delbrueckil Bacteria
bacterial Legionella pneumophia Bacteria
bacterial Listeria a bacteria
bacterial Methicillin-resistant Staphylococcus aureus is gram-positive bacterium
bacterial Micromonospora faeni Bacteria
bacterial Micropolyspora faeni Bacteria
bacterial Moko Disease a bacterium, Ralstonia solanacearum
bacterial Moraxella catarrhalis Bacteria
bacterial Moraxella lacunata Bacteria
bacterial Mycobacterium avium Bacteria
bacterial Mycobacterium intracellulare Bacteria
bacterial Mycobacterium kansasli Bacteria
bacterial Mycobacterium Tuberculosis Bacteria
bacterial Mycoplasma pneumoniae Bacteria
bacterial Neisseria meningitidis Bacteria
bacterial Nocardia Brasilensis Bacteria
bacterial Nocardiaasteroides Bacteria
bacterial Pediococcus acidilactci Bacteria
bacterial Pediococcus Cerevisiae Bacteria
bacterial Pneumocystis carinii Bacteria
bacterial Pseudomona daceae
bacterial Pseudomonas aeruginosa Text
bacterial Pseudomonas Gammaproteo
bacterial Pseudomonas mallei Bacteria
bacterial Pseudomonas pseudomallei Bacteria
bacterial Pseudormonas diminuta Bacteria
bacterial Rice blight
bacterial Salmonella cholerasuis

bacterial Salmonella enteritidis Bacteria
bacterial Salmonella hirschefeldii Bacteria
bacterial Salmonella typhimurium Bacteria
bacterial Salmonella typhosa Bacteria
bacterial Sarcina maxima Bacteria
bacterial Serratia marcescens Bacteria
bacterial Shigella dysenteriae Bacteria
bacterial Staphylococcus Aureus Bacteria
bacterial Staphylococcus aureus gram-positive bacterium
bacterial Streptoccous lactis Bacteria
bacterial Streptococcus faecalis bacteria
bacterial Thermoactinomyces sacchari Bacteria
bacterial Thermoactinomyces vulgaris Bacteria
bacterial Thermomonspora viridis Bacteria
bacterial Wilt of alfalfa.
bacterial Xanthomonas Bacterial Spot, Copper and Bordeaux Text
bacterial Xanthomonas campestris pv. pruni. Text
bacterial Xanthomonas citri (citrus canker)

We have lots on all kinds of bacteria. But when it comes to bacteria testing UNL is the gold standard in the USA and they were able to kill with my product at 16,384, to 1 and some +_ at 32,768 kills. Here is some of my data as I don't want to make it about PicoAg 25B its really about how we perform against Bacteria! Please remember this product is 100% organic made only of dirt and the air! Its hard to imagine you could make a product that you could take 1 gallons and make 16,384 gallons of RTU spray. Now granted you all can figure how to get there bu I want to start at 256 to 1 and will make plenty of money. You want more test but this is a good starter.

Evaluation of Soysoap Formula S-101 and S-102
For Activity Against
Gram-Positive Plant Pathogenic Bacteria

Dr. Anne K. Vidaver, Professor of
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68583-0722

SUMMARY

Biobased USA Soysoap Formula S-100 was effective in vitro at multiple concentrations in killing multiple isolates of agriculturally important Gram-positive plant pathogens. The bacteria tested in these assays were Clavibacter michiganensis subsp. nebraskensis (causal agent of Goss's wilt and blight of maize), Cl. mich. subsp. michiganensis (causal agent of bacterial canker of tomato), Cl. mich. subsp. insidiosus (causal agent of bacterial wilt of alfalfa), and Curtobacterium flaccumfaciens pv. flaccumfaciens (causal agent of bacterial wilt of dry bean). The three subspecies of Clavibacter michiganensis tested had indistinguishable sensitivities to Soysoap Formula S-100 after 22 hours treatment (2^{-14} = 1/16384, or 61 ppm), while Curtobacterium flaccumfaciens pv. flaccumfaciens was much less sensitive (2^{-8} = 1/256, or 3.9 ppt). One replicate of a subset of strains was tested after 2 hours treatment; this shorter exposure time was nearly as effective as 22 hours.

OBJECTIVE

Soysoap Formula S-100 was tested in vitro at multiple concentrations to assess its potential efficacy as a protection agent against important Gram-positive plant pathogenic bacteria in greenhouse and field grown crops.

MATERIALS AND METHODS Test

Organisms

Clavibacter michiganensis subsp. nebraskensis (Cmn) Disease:
Goss' wilt and blight of maize
Isolates tested: 2579 NCPPB (Pawnee Co. Nebraska 1971)
20037 (Dawson Co. Nebraska, 2003)
200800460 (Antelope Co. Nebraska, 2008)

Clavibacter michiganensis subsp. michiganensis (Cmm) Disease:
bacterial canker of tomato
Isolates tested: JD83-1 (Jim Vick, Canadian Canners)
CF-2 (Frontier Co. Nebraska)

Clavibacter michiganensis subsp. insidiosus (Cmi) Disease:
bacterial wilt of alfalfa
Isolates tested: 239
P2

Curtobacterium flaccumfaciens pv. flaccumfaciens (Cff) Disease:
bacterial wilt of dry bean
Isolates tested: 1446 NCPPB (Hungary, 1982)
Small Red (Scotts Bluff Co. Nebraska, 2005)

Bacterial cultures had been maintained as lyophilized cultures or in Microbank vials (PRO-LAB Diagnostics, Canada) at -70°C. Culture suspensions, made from colonies grown on Tryptic Soy Agar, were grown for two to three hours in 10 ml Tryptic Soy Broth (Difco, Sparks, MD) at 27°C, sessile. The optical density of each culture was determined spectrophotometrically at 640.

Agents Tested

Tested in this assay was Soysoap Formula S-100 non-toxic surfactant
an amber, viscous solution, .

Method

A modified Minimal Inhibitory Concentration (MIC) microbiological assay was used to determine levels of resistance of plant pathogens to this agent. Briefly, this method involves serial dilutions (1:2) of the test agent in TSB, a liquid growth medium. After the dilutions were made, an aliquot of bacterial suspensions was added to each tube, except for an uninoculated control. The tubes were incubated for 22 hours, shaking,

at 27 C. Three 10 µL aliquots from each dilution were placed on the surface of a TSA plate, and the plates were incubated at 27 C for 96 hours.

For the first assay (Table 1), the test agent was diluted in ten replicates: One milliliter of Soysoap Formula S-100 concentrate was added to 1 ml of the first tube of the series and mixed; 1 ml of this tube was transferred to the second tube of 1 ml and mixed. The dilution process was repeated in subsequent tubes resulting in a final series which included the undiluted agent, 1:2, 1:4, 1:8, 1:16, 1:32, 1:64, 1:128, 1:256, 1:512, and 1:1024 dilutions.

For the second assay (Tables 2 & 3), the test agent was serially diluted as a single replicate, but in sufficient volume to dispense one milliliter aliquots for each of the two replicates of each strain tested. This dilution series extended from the undiluted agent out to 1:131,072, in two-fold dilutions.

For each of the assays, control tubes were included: broth only and bacteria + broth (no agent). An additional control was included for the second assay: the dilution series with no bacteria added was checked for the absence of contaminating bacteria. Each bacterial isolate was tested in two replicate dilutions of the treatment.

The Minimum Inhibitory Concentration of an agent is the highest dilution or lowest concentration which prevents the growth of a bacterial culture. In a standard MIC assay, bacterial growth is assessed after incubation by comparing each tube of the dilution series visually or turbidimetrically against the control tube which contains the bacterial suspension with no test agent. We modified the MIC protocol by plating triplicate 10 µL aliquots of each test dilution and controls on TSA II™ Trypticase Soy Agar (BBL, Cockeysville, MD) medium to validate and quantitate bacterial survival. The assay plates were incubated at 27 °C, examined every 24 hours, and bacterial growth was recorded for controls and each dilution 96 hours after inoculation. The assay plates were kept for an additional 10-12 days at 27 °C to determine whether there were any “escapes” or additional surviving cells.

RESULTS

The results of independent assays are presented in table format and attached. Growth of bacteria was recorded as positive (+) or negative (-) based on visible growth in the areas of inoculum (triplicate spots) on the agar plates. The minimum inhibitory concentration of agents is indicated on the tables by a yellow shading of cells; growth of bacteria

by green shading.

The three subspecies of Clavibacter michiganensis tested had indistinguishable sensitivities to Soysoap Formula S-100, not surprising given their extensively confirmed relatedness. Curtobacterium flaccumfaciens pv. flaccumfaciens was much less sensitive, a surprising result because this pathogen is closely related to the other three.

DISCUSSION

There are limited bacterial control agents currently registered for crop protection in the U.S. and worldwide. Screening for cost effective bactericides including bio-based, synthetic and inorganic compounds frequently begins in the laboratory with in vitro assays to evaluate the activity of the agent against target organisms in a non-plant system under standardized conditions. In vitro activity of an agent against a target organism suggests potential but does not predict efficacy in plant disease control.

The assays of Soysoap Formula S-100 demonstrated its in vitro activity at 22 hours against multiple isolates of four important bacterial pathogens of important crops. Even at very low concentrations Soysoap Formula S-100 was highly active against Cmn, the causal agent of Goss's wilt and blight of maize, Cmm, the causal agent of bacterial canker of tomato and Cmi, the causal agent of bacterial wilt of alfalfa (Tables 2a & 2b). Except for one of the two strains of Cmi (which may be an atypical strain), these pathogens did not survive at a concentration of 61 ppm (MIC = 1:16384), which is impressive. Previously, Cmn was tested against Soysoap S-102, and in those tests the pathogen did not survive a concentration of 980 ppm (or 0.098%) (MIC = 1:1024).

Soysoap Formula S-100 demonstrated a reduced activity at 22 hours against Cff, the agent of bacterial wilt of bean (MIC = 1:64 for one isolate and MIC = 1:128 for the other). These results for Cff were similar to the results for Soysoap S-102 vs. Cff.

The activity of Soysoap Formula S-101 at two hours was tested for one of the two replicates for two strains of Cmn, one strain of Cmm, one strain of Cmi and the Cff strain (Table 3). The results at two hours, limited as they were by assaying only one replicate of fewer strains, were similar to the results at 22 hours, but the additional incubation time did appear to allow lower concentrations of Soysoap Formula S-100 to be more effective relative to the two hour incubation.

Based on these promising results, areas for further study might include testing activity of Soysoap Formula S-101 or Soysoap S-102 (or both) at several concentrations in greenhouse and field grown plants to evaluate efficacy and phytotoxicity in planta (in

plants), selection of delivery method of agent and pathogen, and time sequence studies to assess death rate of bacterial pathogens when the agent is applied prior to or after plant inoculation.

Report prepared with the invaluable assistance of Patricia A. Lambrecht by Randall R. Carlson, Research Scientist I, University of Nebraska Lincoln.

Table 1. Initial screen of pathogens vs. dilutions of *Soysoap Formula S-101*. Results at 96 hours after treatment for 22 hours.

concentration	strain	Cff 1446		Cff small red		Cmn 2579		Cmn20037		Cmn20080	
of Formula 101	replicate	A	B	A	B	A	B	A	B	A	B
100%	undiluted	—	—	—	—	—	—	—	—	—	—
50%	1/2	—	—	—	—	—	—	—	—	—	—
25%	1/4	—	—	—	—	—	—	—	—	—	—
12.5%	1/8	—	—	—	—	—	—	—	—	—	—
6.25%	1/16	—	—	—	—	—	—	—	—	—	—
31.3 ppt	1/32	—	—	—	—	—	—	—	—	—	—
15.6 ppt	1/64	+/–	+/–	—	—	—	—	—	—	—	—
7.81 ppt	1/128	+/–	+/–	+/–	+/–	—	—	—	—	—	—
3.91 ppt	1/256	+++	+++	+++	+++	—	cont.	—	—	—	—
1.95 ppt	1/512	+++	+++	+++	+++	—	cont.	—	—	—	—
977 ppm	1/1024	+++	+++	+++	+++	—	cont.	—	—	—	—
488 ppm	1/2048	+++	+++	+++	+++	—	cont.	—	—	—	—
244 ppm	1/4096	+++	+++	+++	+++	—	cont.	—	—	—	—
122 ppm	1/8192	+++	+++	+++	+++	—	cont.	—	—	—	—
	untrted	+++	+++	+++	+++	+++	+++	+++	+++	+++	+++
	sterile	—	—	—	—	—	—	—	—	—	—

Key: —, no growth (pink)(yellow for MIC); +/–, only a few colonies (green); +++, confluent growth (green); cont., contaminated

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Table 2a. Second screen of pathogens vs. dilutions of Soysoap Formula S-101. Results at 96 hours after treatment for 22 hours.

concentration	strain	Cff 1446		Cmn 2579		Cmn20037		Cmn20080	
of Formula 101	replicate	A	B	A	B	A	B	A	B
100%	undiluted	NT	NT	NT	NT	NT	NT	NT	NT
50%	1/2	NT	NT	NT	NT	NT	NT	NT	NT
25%	1/4	NT	NT	NT	NT	NT	NT	NT	NT
12.5%	1/8	NT	NT	NT	NT	NT	NT	NT	NT
6.25%	1/16	NT	NT	NT	NT	NT	NT	NT	NT
31.3 ppt	1/32	NT	NT	NT	NT	NT	NT	NT	NT
15.6 ppt	1/64	NT	NT	NT	NT	NT	NT	NT	NT
7.81 ppt	1/128	NT	NT	NT	NT	NT	NT	NT	NT
3.91 ppt	1/256	+/–	+/–	NT	NT	NT	NT	NT	NT
1.95 ppt	1/512	+/–	+/–	NT	NT	NT	NT	NT	NT
977 ppm	1/1024	+++	+++	NT	NT	NT	NT	NT	NT
488 ppm	1/2048	+++	+++	NT	NT	NT	NT	NT	NT
244 ppm	1/4096	NT	NT	—	—	—	—	—	—
122 ppm	1/8192	NT	NT	—	—	—	—	—	—
61.0 ppm	1/16384	NT	NT	—	—	—	—	—	—
30.5 ppm	1/32768	NT	NT	+++	+++	+/–	+/–	+/–	+/–
15.3 ppm	1/65536	NT	NT	+++	+++	+++	+++	+++	+++
7.63 ppm	1/131072	NT	NT	+++	+++	+++	+++	+++	+++
	no trtmnt	+++	+++	+++	+++	+++	+++	+++	+++
	diluent	—	—	—	—	—	—	—	—

Key: —, no growth (pink)(yellow for MIC); +/–, only a few colonies (green); +++, confluent growth (green); NT, not tested (blue)

Table 2b. Second screen of pathogens vs. dilutions of Soysoap Formula S-101. Results at 96 hours after treatment for 22 hours.

concentration	strain	CmmJD83-1		CmmCF-2		CmiP2		Cmi239		Dilution
of Formula 101	replicate	A	B	A	B	A	B	A	B	Only
100%	undiluted	NT	NT	NT	NT	NT	NT	NT	NT	NT
50%	1/2	NT	NT	NT	NT	NT	NT	NT	NT	NT
25%	1/4	NT	NT	NT	NT	NT	NT	NT	NT	—
12.5%	1/8	NT	NT	NT	NT	NT	NT	NT	NT	—
6.25%	1/16	NT	NT	NT	NT	NT	NT	NT	NT	—
31.3 ppt	1/32	NT	NT	NT	NT	NT	NT	NT	NT	—
15.6 ppt	1/64	NT	NT	NT	NT	NT	NT	NT	NT	—
7.81 ppt	1/128	NT	NT	NT	NT	NT	NT	NT	NT	—
3.91 ppt	1/256	—	—	—	—	—	—	+++	+++	—
1.95 ppt	1/512	—	—	—	—	—	—	+++	+++	—
977 ppm	1/1024	—	—	—	—	—	—	+++	+++	—
488 ppm	1/2048	—	—	—	—	—	—	+++	+++	—
244 ppm	1/4096	—	—	—	—	—	—	+++	+++	—
122 ppm	1/8192	—	—	—	—	—	—	+++	+++	—
61.0 ppm	1/16384	—	—	—	+/–	—	—	+++	+++	—
30.5 ppm	1/32768	+++	+++	+++	+++	+++	+++	+++	+++	—
15.3 ppm	1/65536	+++	+++	+++	+++	+++	+++	+++	+++	—
7.63 ppm	1/131072	+++	+++	+++	+++	+++	+++	+++	+++	—
	no trtmnt	+++	+++	+++	+++	+++	+++	+++	+++	NT
	diluent	—	—	—	—	—	—	—	—	NT

Key: —, no growth (pink)(yellow for MIC); +/–, only a few colonies (green); +++, confluent growth (green); NT, not tested (blue)

Table 3. Second screen of a subset of pathogens vs. dilutions of Soysoap Formula S-101. Results at 96 hours after treatment for either 2 or 22 hours.

Concentration	strain	Cff 1446 A		Cmn 2579 A		Cmn20037 A		CmmJD83-1		CmiP2	
of Formula 101	time	2 h	22 h	2 h	22 h	2 h	22 h	2 h	22 h	2 h	22 h
6.25%	1/16	—	—	NT	NT	NT	NT	NT	NT	NT	NT
31.3 ppt	1/32	—	—	NT	NT	NT	NT	NT	NT	NT	NT
15.6 ppt	1/64	+/–	—	NT	NT	NT	NT	NT	NT	NT	NT
7.81 ppt	1/128	+/–	+/–	NT	NT	NT	NT	NT	NT	NT	NT
3.91 ppt	1/256	+/–	+/–	NT	NT	NT	NT	—	—	—	—
1.95 ppt	1/512	+++	+/–	NT	NT	NT	NT	—	—	—	—
977 ppm	1/1024	+++	+++	NT	NT	NT	NT	—	—	—	—
488 ppm	1/2048	+++	+++	NT	NT	NT	NT	+/–	—	+/–	—
244 ppm	1/4096	NT	NT	—	—	—	—	+/–	—	+/–	—
122 ppm	1/8192	NT	NT	+/–	—	+/–	—	+++	—	+++	—
61.0 ppm	1/16384	NT	NT	+++	—	+/–	—	+++	—	+++	—
30.5 ppm	1/32768	NT	NT	+++	+++	+++	+/–	+++	+++	+++	+++
15.3 ppm	1/65536	NT	NT	+++	+++	+++	+++	+++	+++	+++	+++
7.63 ppm	1/131072	NT	NT	+++	+++	+++	+++	+++	+++	+++	+++
	no trtmnt	+++	+++	+++	+++	+++	+++	+++	+++	+++	+++
	diluent	—	—	—	—	—	—	—	—	—	—

Key: —, no growth (pink)(yellow for MIC); +/–, only a few colonies (green); +++, confluent growth (green); NT, not tested (blue)

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