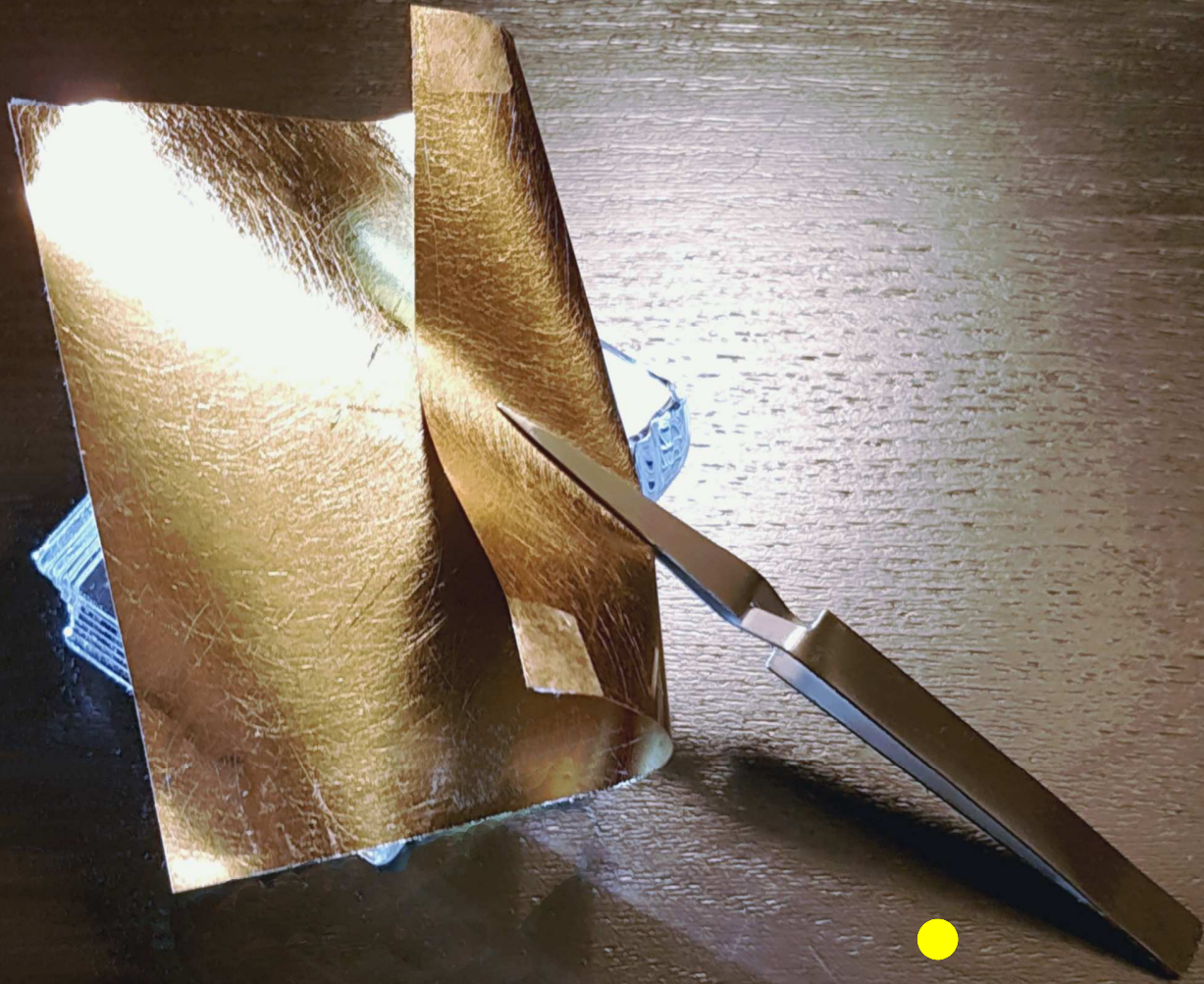


Skin / wound treatments - **"Dress-It"** ●



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Introduction

"Dress-It" is the title of various anti-pathogen, therapeutic platforms, made to make various "Products".

Combines life sciences with metals. Metalloplasia/metalloantibiotics

"Dress-It" perpetually and continuously performs to treat skin and wound disorders, infections, and cures.

Eradicates almost instantly a wide range of bacteria and pathogens.

- Is also protective, curative, accelerates healing, regenerates, reduces scarring, rejuvenates, improves the well-being of the skin, stimulates dermal fibroblast proliferation, and has anti-oxidant properties.

- Virucidal, effective against enveloped and non-enveloped viruses.

- Antifungal.

- Unlike current used products that evaporate, get diluted, dissolve, and need to be reapplied, "Dress-It" continues to perform as long as it is in place.

Free from antibiotics and hormones, non-allergic

In certain applications, it addresses the "antibiotic resistance crisis."

In this brochure, the "Dress-It" platform is not 'Laced', but for certain applications, it can be. This is only one of the platforms covered by the patent; others use different material states.

This brochure is prepared to introduce "Dress-It" to medical dermatologic professionals and consumer hygienic, cosmetic, wound, and skin producers.

INNOVATIVE

Benefits and features

A novel approach, treatments combining life sciences with metals and their compounds, based on well-known science, with multi-component synergy performance, microminiaturized active surface, with possible new pathogen neutralizing mechanisms, selective toxicity against unhealthy cells. Designed for safe to use, wide-ranging applications, to meet existing and emerging new medical challenges.

Providing a broad range of protective, curing, and rejuvenating solutions that no similar performing materials offer.

The active material's effectiveness is accepted and established as safe.

Stable in storage, even in harsh climatic conditions.

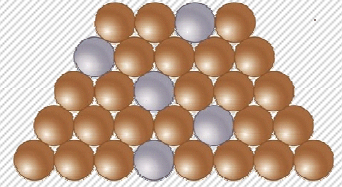
The active ingredients are sustainable and, when used, are not considered a biohazard.

Overview

"Dress-It" is a highly effective and novel approach to treating skin and wound disorders. In these applications, they are more effective than antibiotics and common NP-sized metallic materials.

Following are brief details about the active components:

The active material is our patented micro-miniaturized, monolithic alloys, a combination of transit and noble metals whose multi components are interstitially linked together in lattice form and made to perform in synergy, a hybrid performance that enhances its pathogen neutralization performance while at the same time having therapeutic properties. Has an overall thickness of less than 200 atoms (~ 0.1 microns).



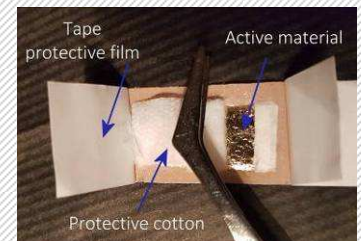
The micro-miniaturized active material has a 1000-times larger treating surface than other traditional systems.

For most applications, the active component of "Dress-It" is unique in non-particle form, making it way safer and more effective than nano-sized NP particle form

NP particle safety

NP Nanoparticle-sized materials pose a safety issue as they have a systematic uptake tendency through wounds and skin that leads to accumulation in certain organs.

For further information, please refer to pages 14- 16.



"Dress-It" active surface eradicates bacteria, slows and decreases their growth at the same time, attacks the wall surrounding them, interfering with their reproduction and blocking their protein production, harming the microorganisms' envelope phospholipids, microbial envelope or intracellular proteins, and nucleic acids, and irreversibly damages and kills pathogens.

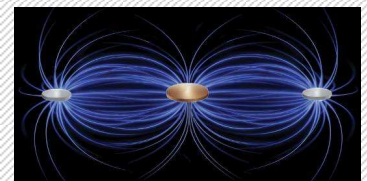
It is effective against dry and wet spores and enveloped and non-enveloped viruses.

Is versatile and, if need be, can be configured and engineered to meet emerging challenges. can be digitally laced with other materials.

In certain applications, certain grades offer unique preferential toxicity against harmful cells while being non-harmful to healthy cells.

For certain medical needs, it is made to have an inherent mild electric field potential.

In usage, practically no material is consumed.



"Dress-It" features

- Actively repels pathogens, making them non-stick or "self-sanitizing," and almost instantly neutralizes pathogens. Keeps pathogenic microorganisms at bay.
- It is effective in neutralizing antibiotic-resistant pathogens (AMR) that are ubiquitous in hospitals (HAIs) and iatrogenic infections caused by drug-resistant bacteria and viral infections.
- It is curative, therapeutic, and preventive, and it helps to soothe, accelerate healing, regenerate, reduce scarring, rejuvenate, improve the well-being of the skin, and stimulate dermal fibroblast proliferation.
- It has the ability to perform well in a wide range of temperature variations, whether hot or cold, in dry or wet.
- It has been proven that it can be used without developing resistance.
- Has anti-oxidant properties.
- Long half life
- Is antibiotic, hormone-free, non-allergic, and non-irritating.
- Human-safe, non-cytotoxic, long-lasting, odorless, and does not off-gas.
- Made soft to the touch.

Stable in storage, in harsh climatic conditions; its active areas perpetually remain biologically clean.

Performance

"Dress-It" has accelerated, almost instantaneous, neutralizing bactericidal efficacy. Bacterial cells' membranes are almost immediately damaged.

Examples:

- A 4.41 log₁₀ reduction (>99.99%) of the deadly Staphylococcus aureus bacteria was neutralized within **2 minutes** upon contact.
- Pseudomonas aeruginosa: 2.2 x 10⁷ reduction (>99.99%) within 40 min upon contact.
- "Dress-It" uptake is faster on dry than moist surfaces, stimulating the production of interleukin-2, and causing the expression of vascular endothelial growth factor (VEGF) that stimulates angiogenesis in wounds. These factors help in wound healing by enhancing angiogenesis, anti-inflammatory activity, and immunity.
- Its antipathogenic properties are enhanced by body temperature and body fluids. Effective in wide ranges of temperatures.
- Has astringent and antiseptic properties; multi-active components can be made for improving arterial and venous leg ulcers.



WEST end Staphylococcus aureus MRSA

Synergy performance

Is microstructured, made with multiple components that perform in synergy, serving as a cofactor for enzymes such as superoxide dismutase and cytochrome oxidase.

If needed, made to be in 3D variable composition.

Anti-pathogen neutralization time (1st generation prior to accelerated enhancement)

Contact killing time of microbes by permanent active surface * 

Species	Application method	Killing time, RT ^a
<i>Salmonella enterica</i>	Wet, 4.5 x 10 ⁶ CFU ^b	4 h
<i>Campylobacter jejuni</i>	Wet, 4.5 x 10 ⁶ CFU ^b	8 h
<i>Escherichia coli</i> O157	Wet, (3–4) x 10 ⁷ CFU ^c	65 min
<i>Escherichia coli</i> O157	Wet, 2.7 x 10 ⁷ CFU ^c	75 min
MRSAd (NCTC10442)	Wet, (1–1.9) x 10 ⁷ CFU ^c	45 min
EMRSA-1e (NCTC11939)	Wet, (1–1.9) x 10 ⁷ CFU ^c	60 min
EMRSA-16e (NCTC13143)	Wet, (1–1.9) x 10 ⁵ CFU ^c	90 min
<i>Listeria monocytogenes</i> Scott A	Wet, 10 ⁷ CFU ^c	60 min
<i>Mycobacterium tuberculosis</i>	Wet, 2.5 x 10 ⁷ CFU ^f	5 to 15 days ^g
<i>Candida albicans</i>	Wet, >10 ⁵ CFU ^f	60 min
<i>Klebsiella pneumoniae</i>	Wet, >10 ⁷ CFU ^f	60 min
<i>Pseudomonas aeruginosa</i>	Wet, >10 ⁷ CFU ^f	180 min
<i>Acinetobacter baumannii</i>	Wet, >10 ⁷ CFU ^f	180 min
MRSA	Wet, >10 ⁷ CFU ^f	180 min
Influenza A virus (H1N1)	Wet, 5 x 10 ⁵ viruses ^h	6 h, 4-log decrease
<i>C. difficile</i> (ATCC 9689) vegetative cells and spores	Wet, 2.2 x 10 ⁵ CFU ^c	24–48 h
<i>C. difficile</i> NCTC11204/R20291 vegetative cells	Wet, (1-5) x 10 ⁶ CFU ⁱ	30 min
<i>C. difficile</i> dormant spores	Wet, 8 x 10 ⁶ CFU ⁱ	Unaffected in 3 h
<i>C. difficile</i> germinating spores	Wet, 8 ^c 10 ⁶ CFU ⁱ	3 h, 3-log decrease
<i>Pseudomonas aeruginosa</i> PAO1	Wet, 2.2 x 10 ⁷ CFU	120 min
MRSA NCTC 10442	Wet, 2 x 10 ⁷ CFU	75 min, 7 log decrease
<i>Escherichia coli</i> W3110	Dry, 10 ⁹ CFU ⁱ	1 min
<i>Acinetobacter johnsonii</i> DSM6963	Dry, 10 ⁹ CFU ^k	A few minutes
<i>Pantoea stewartii</i> DSM30176	Dry, 10 ⁹ CFU ⁱ	1 min
<i>Pseudomonas oleovorans</i> DSM 1045	Dry, 10 ⁹ CFU ^k	1 min
<i>Staphylococcus warnerii</i> DSM20316	Dry, 10 ⁹ CFU ^k	A few minutes
<i>Brachybacterium conglomeratum</i> DSM 10241	Dry, 10 ⁹ CFU ^k	A few minutes
<i>Aspergillus flavus</i>	Wet, (2–300) x 10 ⁵ spores ^c	120 h
<i>Aspergillus fumigatus</i>	Wet, (2–300) x 10 ⁵ spores ^c	>120 h
<i>Aspergillus niger</i>	Wet, (2–300) x 10 ⁵ spores ^c	>576 h
<i>Fusarium culmorum</i>	Wet, (2–300) x 10 ⁵ spores ^c	24 h
<i>Fusarium oxysporum</i>	Wet, (2–300) x 10 ⁵ spores ^c	24 h
<i>Fusarium solani</i>	Wet, (2–300) x 10 ⁵ spores ^c	24 h
<i>Penicillium crysogenum</i>	Wet, (2–300) x 10 ⁵ spores ^c	24 h
<i>Candida albicans</i>	Wet, (2–300) x 10 ⁵ spores ^c	24 h
<i>Enterococcus hirae</i> ATCC 9790	Wet, 10 ⁷ CFU ^c	90 min
Different <i>Enterococcus</i> spp.	Wet, 10 ⁶ CFU ^f	60 min
<i>Candida albicans</i>	Dry, 10 ⁶ CFU ^k	5 min
<i>Saccharomyces cerevisiae</i>	Dry, 10 ⁶ CFU ^k	30 s

^a RT, room temperature.

^b Inoculation with 1.5 ml of culture (4.5 _ 10⁶ CFU), kept under humid conditions.

^c Inoculation with a 20-_l drop of culture.

^d Methicillin-resistant *Staphylococcus aureus*.

^e Epidemic methicillin-resistant *Staphylococcus aureus*.

^f Twenty micro liters of culture spread on coupons.

^g Time before strain became culture positive in Bactec 12B growth medium after exposure.

^h Inoculation with 20 _l of virion suspension.

ⁱ One hundred micro liters of dilute culture.

^j Twenty-five micro liters of culture spread on coupons with a glass spreader.

^k Thin film applied with a cotton swab.

*Source: MINIREVIEWS APPLIED AND ENVIRONMENTAL MICROBIOLOGY, Mar.2011,p.1541–1547 

"Dress-It" active surface is a multi-component alloy, made up of transit and Nobel metals, certain grade's component can be copper, the above relates to its performance.

Applications:

Dressings for wounds:

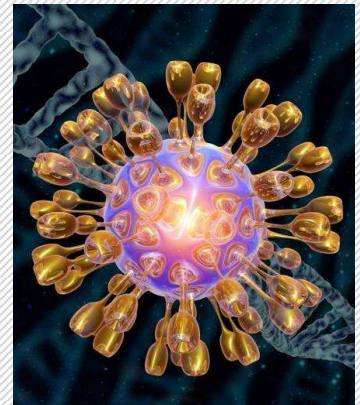
- Diabetic
- Leg and foot ulcers
- Pressure sores
- First and second degree burns
- Surgical incisions
- Used as a skin's extra cellular matrix and for the healing of wounds.



Eczema New Scientist

Other controlling applications:

- Toe nail fungus
- Herpes
- An ulcer
- Bug bites
- Bed sores



HSV-1 Genetically Decoded
Biochemistry Genetics Molecular Biology
University of Würzburg Virology

Skin treatments

To reduce skin inflammation and promote skin cell renewal, as well as the following additional advantages:

- As an antioxidant for skin
- The development of new skin tissue, which makes it effective as a scar corrector.
- Stimulant of cell development, healing of the scalp, thickness of the hair shaft, and hair follicle regrowth.
- Anti-acne.
- Anti-aging
- To lessen 'crow' feet

Sanitary

- To soothe and prevent diaper rash as well as other minor skin irritations (such as burns, wounds, chafing, scrapes, bug bites, etc.).
- As an integrated disinfectant for diapers and sanitary napkins, neutralizing bodily fluids, blood, and excrement.

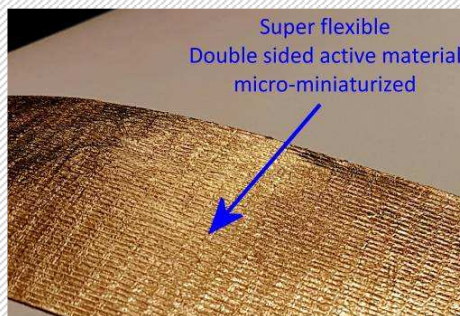
In most uses "Dress-It" can be re-utilized

Products made with "Dress-It" platform

"Dress-It" - Double 2848, dual side active



"Dress-It" Double 2848 ●



Our patented micro-miniaturized, monolithic alloys are made from transit and noble metals that are used to create the **"Dress-It" Double 2848** family for uses such as 'Folds'. A special technique is used to accelerate pathogen neutralization performance and therapeutic qualities. **Double 2848** is designed to be vapor permeable, enabling water vapor and oxygen to pass through to allow the skin to interact with the air while remaining impervious to water and microbes, creating a reliable barrier to outside contamination. They absorb exudates when backed up with bacteria or microbial plant cellulose.

- **"Double 2848"** is easy to store and has a long shelf life.
- Flexible, soft adaptable to uneven surfaces, and simple to use.

"Protective Pouch 0858".



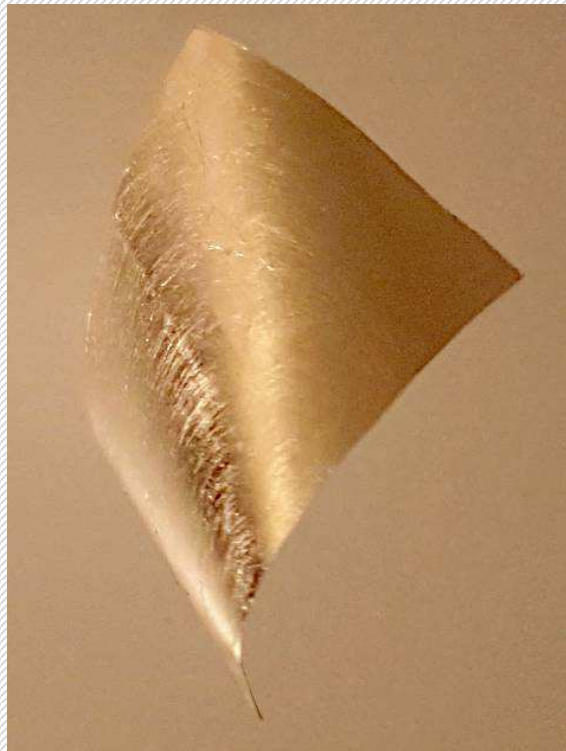
"Protective pouch" 0858

"Protective Pouch" 0858, upon placing material in it, protects and neutralizes. It is made by our **"Dress-It"** platform.

"Skin dressing 0856 C": 'Loose fit'

The reverse of **"Skin dressing 0856 C"** features either temporary or permanent adhesive, allowing it to be applied to the inner surface of garments (under shirts, hats, socks, leggings, etc.). It is intended for loose contact with the skin.

"Skin dressing 0856 C" is made using the **"Dress-It"** platform that is backed by a super soft, comfortable, transparent film barrier composed of polymer membrane.



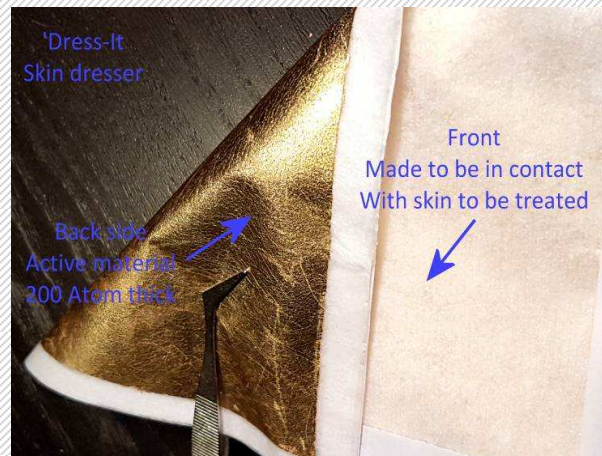
"Skin dressing 0856 C" ●

"Skin Dressing 0368":

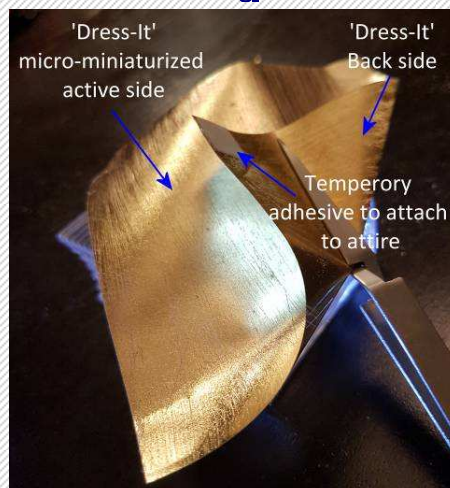
"Skin Dressing 0368" is made using the "Dress-It" platform. The reverse of "Skin Dressing 0368" is backed by various types of absorptive pads that are incredibly flexible. Combination of soft fabrics and particles like methylcellulose, gelatin, or pectin in a range of sizes. The active surfaces are made to be in contact with the skin area that needs to be treated.

When these mix with moisture in combination with "Dress-It", they create a gel-like disinfecting therapeutic substance that sits and promotes faster healing.

Made to be temporarily attached to the inner surface of garments (under shirts, hats, socks, leggings, etc.), using either temporary or permanent adhesive on the back.



Skin dressing 368 PA---

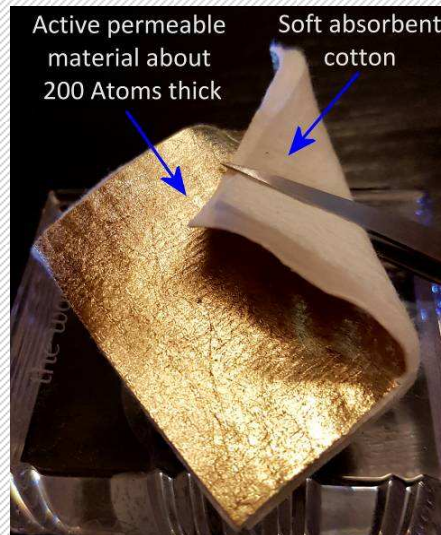


Skin dressing 388 T--- ●

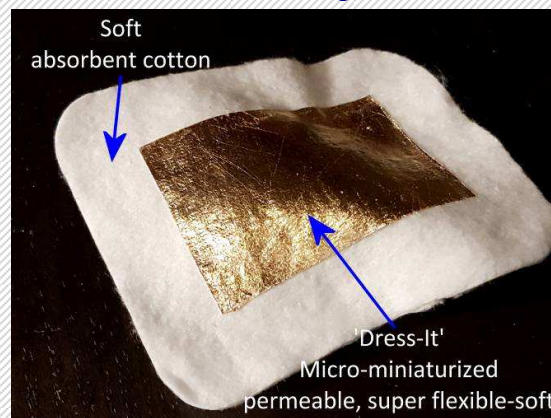
"Skin-wound dressing 2848 ...":

"Skin-Wound Dressing 2848" is made using the "Dress-It" platform; the reverse is backed by woven cotton fabric, various bacteria, or microbial plant cellulose, to absorb exudates.

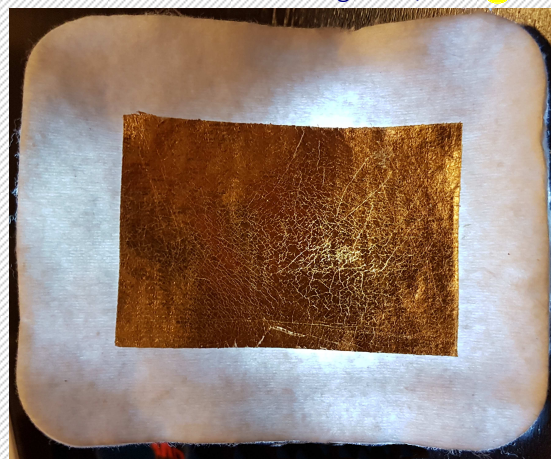
The "Dress-It" platform as used is multi-component and performs in synergy for a combined treatment effect. Is performance adaptive, has accelerated pathogen neutralization performance, has therapeutic qualities, and is permeable.



Skin-Wound dressing 2848/185



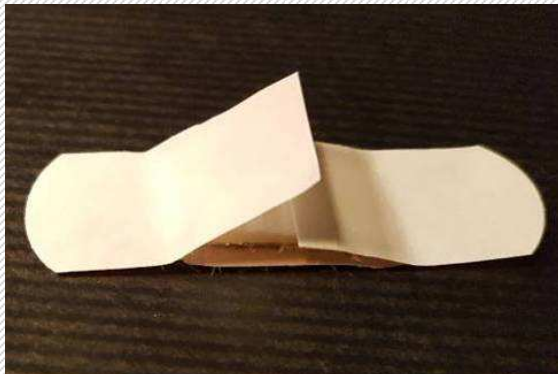
Skin-Wound dressing 2848/186 ●



Permeability of Skin-Wound dressing's 2848/186

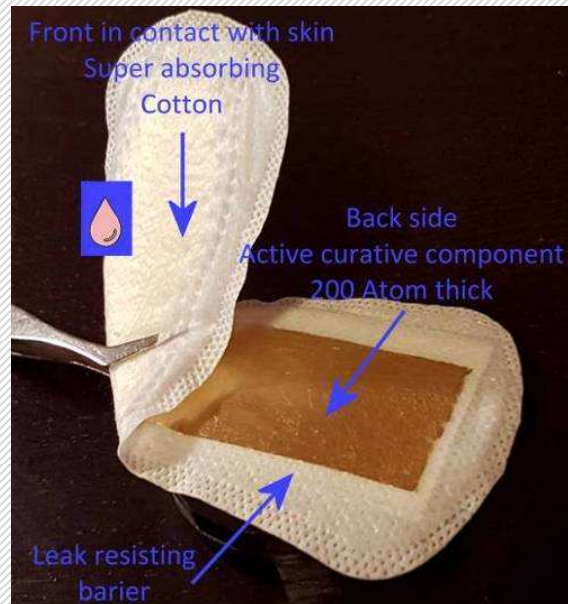
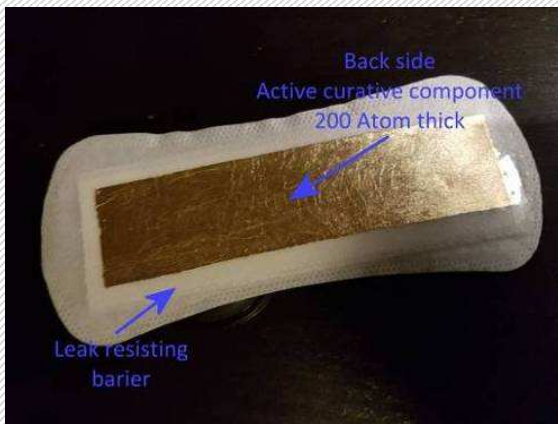
Super tape, disinfecting therapeutic, sanitary pad lining, adult diapers:

The "Dress-It" platform, with its inherent multi-combined components, is backed with adhesive tape to make "Super Tape 0935" a pathogen-neutralizing therapeutic tape. To disinfect, treat, and protect.



"Super Tape 0935"

For disinfecting, curative, soothing, protective, and preventive purposes in intimate areas, "Dress-It" platforms are made into sanitary pads and diapers.



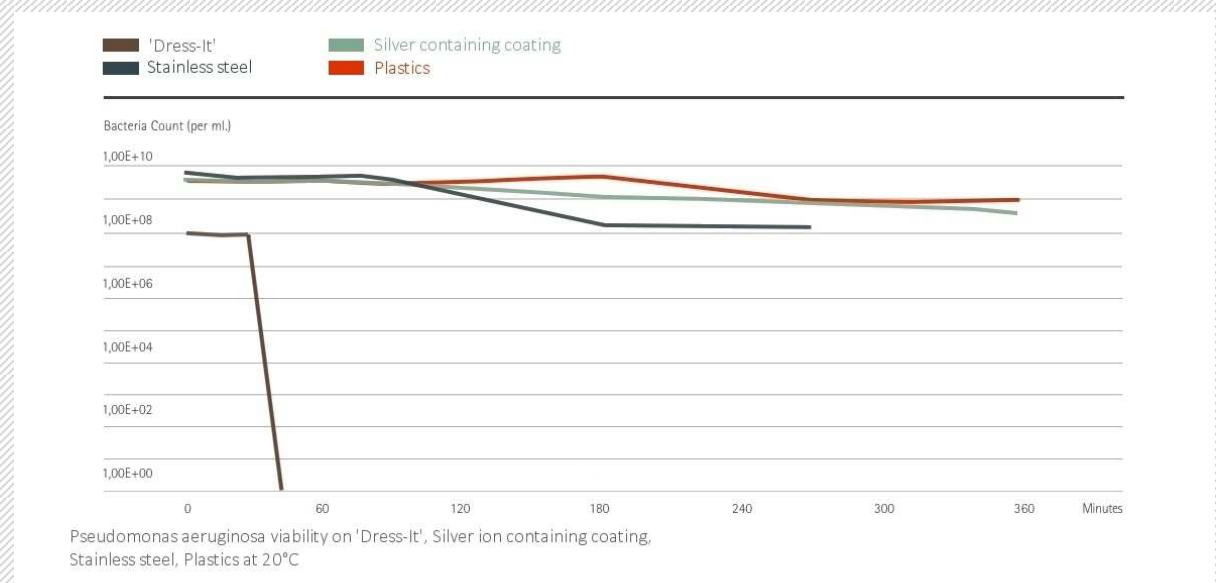
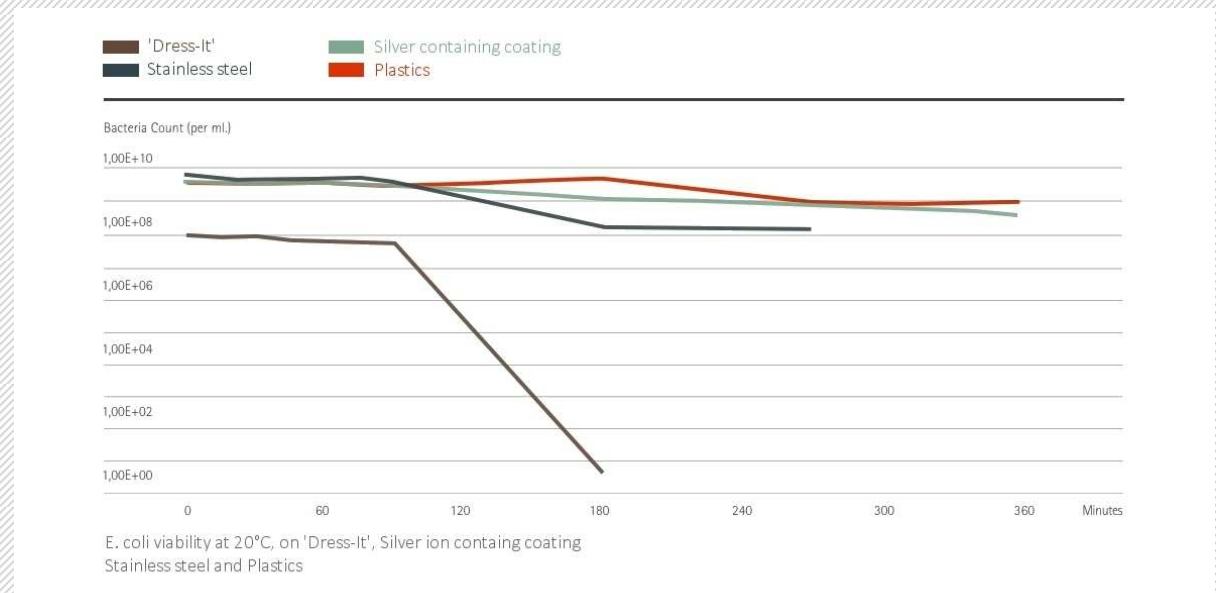
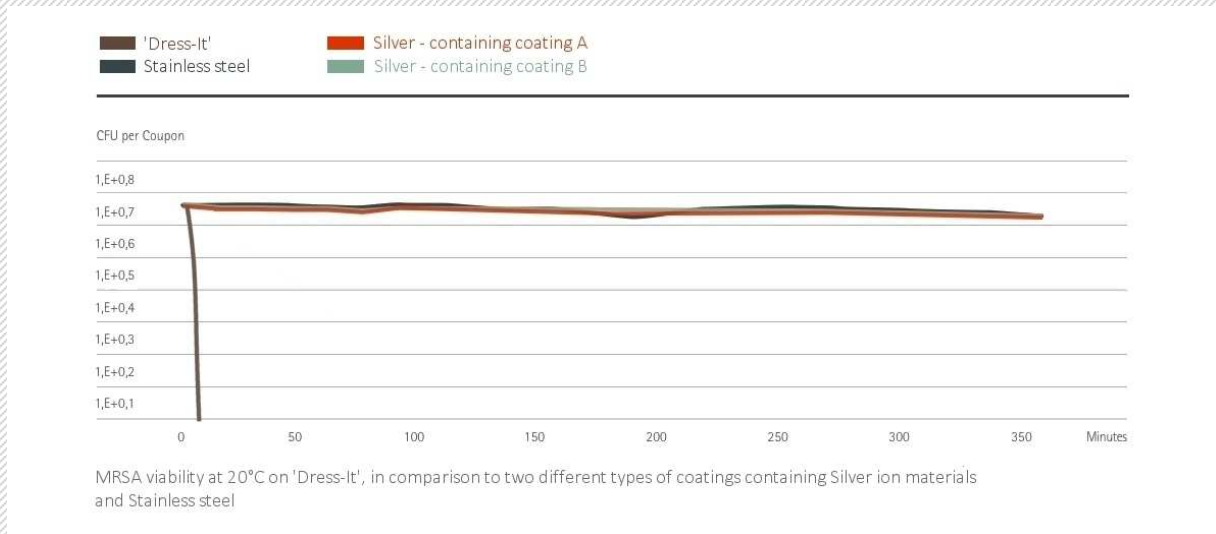
Disinfecting / curative Sanitary pad



Adult diaper

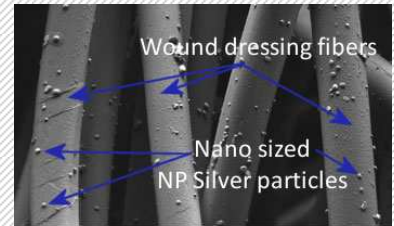
Comparison of "**Dress-It**" active material to
Nanoparticle-sized biocides such as Silver ions and Copper oxide

Performance comparison of "Dress-It" Neutralizing efficacy in comparison to typical coating materials containing NP-sized Silver ions



In typical current usage, to maximize the neutralizing effect of anti-pathogen materials and biocides, their effective surface area is maximized by reducing them to NP-nanosize particles (1 nm to 100 nm).

Biocides such as silver ions and copper oxide are utilized in this form and suspended in vehicles or in binders. This process limits the quantity of biocide that can be loaded within a vehicle or binder, thus limiting the density or quantity of active material exposed to treat a given area, thus limiting effectiveness.



Fibers coated in silver nanoparticles (Those tiny dots) used in dressings
ZEISS Microscopy/Flickr

"Dress-It" is not made in particle form, thus having a safety advantage over NP-sized biocides. In a unique process, the platform "Dress-It", whose components are interstitially linked together in lattice form, is micro-miniaturized to less than 200 atoms thick.

"Dress-It's" available active effective surface is about 1000 times that of NP-applied types of biocides.

With a unique process, the pathogen-accelerating disinfecting therapeutic effect is accelerated, has a broad range of effectiveness, and is adaptive.

Furthermore, the active surface of "Dress-It" is free from performance-hindering binders and vehicles, eliminating absorption through the skin of skin products such as glycols.



Nanoparticle NP issues:

NP particles pose a safety issue, as they have a possible systematic uptake tendency through wounds or skin that leads to accumulation in certain organs.

Performance comparison:

NP-Silver ions do not perform in dry or on dry spores. Response is limited by temperature:

*"... When tested according to Japanese Industrial Standard (JIS Z 2801), silver surfaces (also Silver ion containing materials) produced measurable efficacy in high humidity (> 90% RH) and high temperature (35°C); however, silver (also Silver ion containing materials) showed no significant response at lower temperature and humidity levels typical of an indoor environment."

Utilizing the latest innovative technology, "Dress-It" is made to have exceptional accelerated, almost instantaneous neutralizing bactericidal efficacy.

Protective evaluation

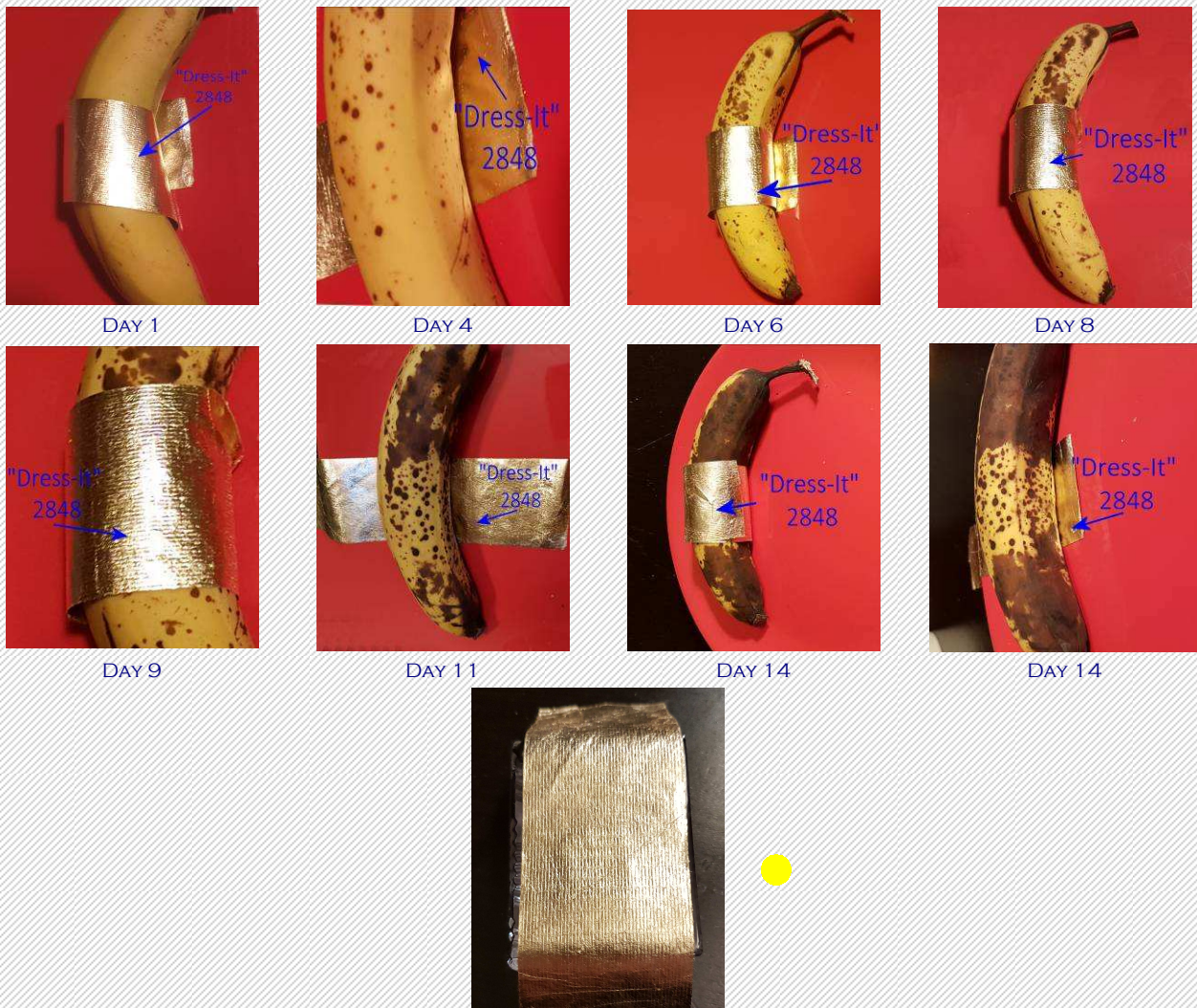
Part of the skin peel of a banana was loosely wrapped with **"Dress-It" Double 2848**, and its effect was observed for a period of 14 days. At the same time, the durability of **"Dress-It" Double 2848** was evaluated.

After 14 days, the wrapped area was undone; the **"Double 2848"** area had the look of day 6, while the rest had dramatically ripened.

The reason could be traced to the active **"Dress-It Double 2848"** material, which inhibits the chlorophyllase enzyme.*

In addition, **"Dress-It Double 2848"** is permeable and protects from the elements.

During the ripening of a banana, water translocates from the peel to the pulp. On the peel of immature bananas, the water content is usually about 90% fresh mass; by the time the water content drops by about 7%, being translocated from the peel to the pulp, the covered area by **"Dress-It Double 2848"** reduces this phenomenon.



AFTER 14 DAYS, IT IS AS IT WAS AND CAN BE USED AGAIN

*Note: The degradation of the banana peel chlorophyll-a (and to a lesser extent, chlorophyll-b) is brought about by the enzyme chlorophyllase

Reference 3 ●

References

Reference 1 ●

Reference 2 ●