SmartGel.

The Magle Chemoswed SmartGel is a plant based viscous gel for use in advanced wound care. It is unique in its formulation, which allows our microspheres to deliver moisture to the wound, whilst still maintaining absorption capacity for exudate, debris and bacteria.

Advantages

- The combination of microspheres in the hydrogel provides sustained antimicrobial activity for the duration of contact with the wound
- Effectively reduces the bacterial load in the wound
- Creates and maintains a moist wound environment
- Reduces healing time
- Has shown effectiveness at removing and preventing biofilm
- Naturally degradable in the wound
- Non-sensitizing and non-irritating for wounds

Performance

The Smart Gel contains 0.3 % PHMB (polyhexamethylene biguanide) allowing a quick and slower release to prevent bacterial growth and further infection.

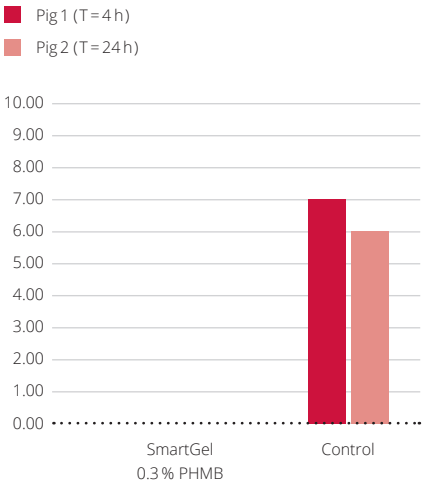
Our SmartGel is proven to absorb moisture from exuding wounds and donate moisture to dry wounds, making it a flexible treatment option for certain types of wounds, such as first and second-degree burns.

Our pre-clinical testing shows that moisture released to wound sites supports autolytic debridement, which can be crucial in removing necrotic tissue.Through quick and sustained release, it delivers an antimicrobial proven to be especially effective against biofilm.

Use of the SmartGel has shown positive results in removing bacteria and preventing antimicrobial growth and biofilm formation during use.

SmartGel in vivo study

Recoverable log CFUs of total bacteria per gram of tissue



The antimicrobial effect of SmartGel, 0.3 % PHMB was tested in acute wounds infected with S. epidermidis (MSA) and Ps. aeruginosa (PIA) after 4 and 24 hrs.

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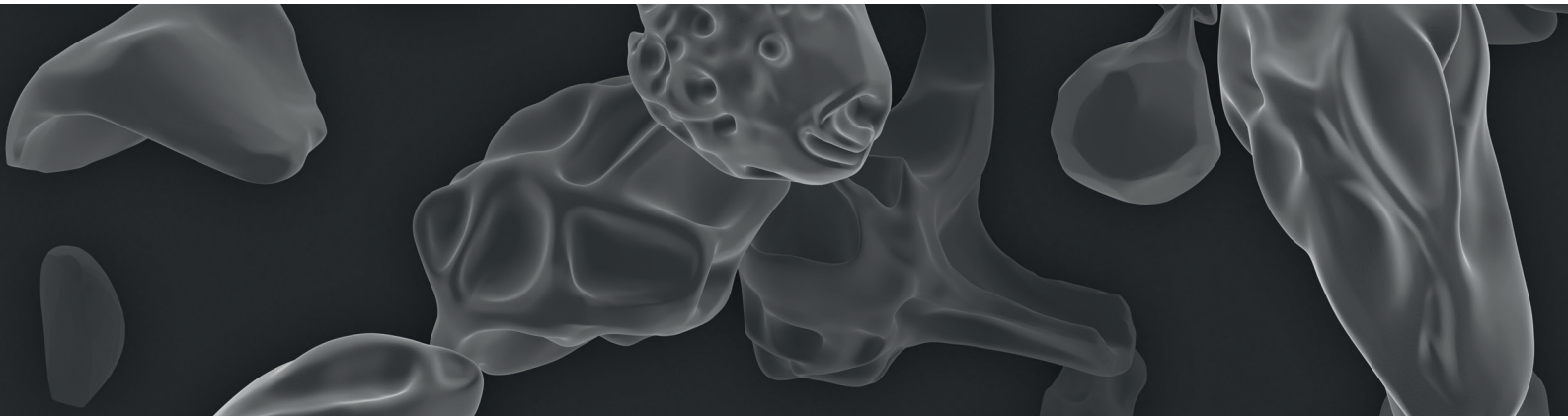

Our proprietary biodegradable starch microspheres, here loaded with an antimicrobial compound.

From idea to product

We pride ourselves in coming up with solutions to complex healthcare challenges. Magle Chemoswed has over 40 years of combined knowledge and experience across the whole value chain, in both pharmaceuticals and medical devices. We have uniqe knowledge of how to formulate drug delivery systems combined with an expertise in drug development and manufacturing. We bring innovations from idea to product.

The technology

The technology base of the Company is microporous polysaccharide Microspheres. These are derived from purified plant starch that is transformed through a unique chemical process developed in-house, which allows us to control microsphere size from 10 µm to 2000 µm. Our microspheres are naturally bio- absorbable.

We have developed thirteen microsphere families with varying characteristics for wide use across our strategic markets. To give an idea of how versatile this technology is; one of our microsphere families in size ranges 500 µm to 1200 µm can be squeezed through a catheter without compromising the integrity of the microsphere and can be used in combination with drug delivery. A second family has a high absorbency rate of x25 for absorption of blood and exudate. All our microspheres have a proven controllable degradation time between 10 minutes to 48 hours.

The technology has been successfully used to incorporate substances up to the size of 6.6k Dalton and in earlier experiments peptides the size of 300k Dalton. We have wide patent protection on our microsphere technologies covering all our strategic markets.

Formulations

We are experts in formulating our technology, and we currently have formulations with applications in Advanced Wound Care, Surgical and Diagnostics and Drug Delivery. Our research and development teams have adapted our technologies to create gels, sponges, unwoven absorbable fibers, naturally degradable films and microporous polysaccharide microspheres.

The technology has been successfully used in combination with active pharmaceutical ingredients, peptides, antimicrobials, polymers, proteins and growth factors, among others. All our microsphere families and formulations are manufactured in our wholly owned FDA inspected and GMP approved manufacturing facilities.

Two of our microsphere technologies have been approved for sale worldwide in specific indications of hemostasis and vascular occlusion. We continue and endeavor, based on our proprietary technology, to find innovative solutions to pressing medical needs. One formulation might act as a vessel for detecting enzymatic leakage in surgery, another can help treat infected serious wounds.

We have a rich and exciting pipeline that will provide valuable solutions to patients and healthcare providers in the future.

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