

CATEGORY: DRESSINGS

BIOSORB™ GELLING FIBRE DRESSING

MAKING THE CASE

WHAT IS BIOSORB GELLING FIBRE DRESSING?

BIOSORB™ Dressing (Acelity) is a unique gelling fibre dressing, which is designed to manage exudate effectively and create an optimal environment for wound healing. When the absorbent dressing comes into contact with wound exudate, it forms a gel. This facilitates autolytic debridement and ensures that any wound debris retained in the fibre dressing is removed at dressing change. The moist wound environment supports healing; the handling of exudate protects the wound edge and surrounding skin from maceration (Acelity, 2017).

BIOSORB Dressing is designed for management of moderate to heavily exuding acute and chronic wounds, including:

- Lower leg ulcers, pressure ulcers (category II to IV), diabetic foot ulcers
- Surgical wounds, e.g. post-operative wounds, wounds left to heal by secondary intent, donor sites
- Partial thickness burns
- Traumatic wounds, e.g. abrasions, lacerations
- Oncology wounds (if moderate or heavily exuding, superficial or deep).

CLINICAL EVIDENCE FOR BIOSORB DRESSING

Case studies in practice have demonstrated the clinical efficacy of BIOSORB Dressing. A series of three case studies (Ivins & Harding, 2017; Figure 1) reported that the dressing's absorption properties enabled a longer period between dressing changes without compromising skin integrity ($n=3$). Patients also found the dressing comfortable, atraumatic on removal and well tolerated under compression; the clinicians reported that the dressing was easy to apply and remove, with no dressing fibres left in the wound bed on removal, and it conformed well.

A further two case studies (Braumann et al, 2017) reported experience using BIOSORB Dressing in daily clinical practice to treat complex wounds with moderate to high exudate levels. The studies reported that BIOSORB Dressing rapidly absorbs fluid, is very strong and easily adjustable and can be removed in one piece without leaving any residue in the wound bed ($n=2$). At the end of 4 weeks of treatment, all wounds treated with BIOSORB Dressing had progressed towards healing. BIOSORB Dressing's ability to absorb wound fluid helps maintain the optimal wound healing environment, which is conducive to autolytic debridement and to support the healing process.

Minimal shrinkage of the dressing when wet supports appropriate coverage of the wound, which may help manage exudate effectively

A soft, conformable gel is formed that creates a moist environment for healing

Innovatively designed to conform well to the wound, limiting space available for bacterial growth (*in vitro*)

Demonstrated to have greater absorbency than leading gelling fibre or hydrofiber dressings (*in vitro*)

High vertical absorption of exudate into the fibre dressing protects the wound edge, supporting the healing process

Designed to hold its shape from start to finish and minimise the risk of fibre shed on removal

Designed for intact removal, making dressing changes less painful



Figure 1: Case study using BIOSORB Dressing in practice (Ivins & Harding, 2017)

In vitro testing, assessing the absorbency of BIOSORB Dressing against leading market competitor dressings (Waite et al, 2016), also found that BIOSORB Dressing is significantly ($p<0.0002$) more absorbent than other competitors in the market, making it ideal for managing exuding wounds.

The technology of BIOSORB Dressing (see Figure 2) means that it is able to absorb and effectively control higher levels of exudate than comparative products. *In vitro* testing using simulated wound fluid demonstrated that BIOSORB Dressing absorbed 35.9g of fluid per 100cm², which was significantly more than any of the competitors it was assessed against (Waite et al, 2016). BIOSORB Dressing was shown *in vitro* to be 43% more absorbent than the market-leading competitor.

Effective fluid management is critical for a positive healing trajectory for the patient (Barrett, 2015). The increased absorbency of BIOSORB Dressing means that it may offer longer wear time, resulting in practical benefits and cost savings in comparison to other gelling fibre or Hydrofiber dressings. BIOSORB Dressing also has the capacity for a high vertical absorption of exudate, which enables the dressing to manage absorbed fluid effectively and control the lateral spread of exudate (lateral wicking). This protects the wound edge and the surrounding skin from maceration (Acelity, 2017).

When tested with simulated wound fluid in a 30-minute timeframe (Waite et al, 2016), the BIOSORB Dressing was able to prevent lateral wicking of the fluid to the outer edges of the dressing, even up to 30 minutes. The leading competitor dressing, when tested in the same way, did not prevent the fluid from wicking towards the edges of the sample; the fluid reached the edges of the dressing within the 30-minute timeframe.

BIOSORB Dressings were also tested against competitors to assess the reduction in area of the dressing when hydrated. BIOSORB Dressing

Figure 2: Construction of the BIOSORB Dressing

Explanation of how to use this guide: This document can be used to make the case for implementing effective prevention and management measures and may be supported by data from your own care setting. As well as economic impact, it is important to know the impact of interventions on patient quality of life and outcomes.

MAKING THE CASE

displayed significantly less shrinkage on hydration compared to competitor products (Waite et al, 2016). Reduced shrinkage of the dressing when wet may help clinicians to select the correct size of dressing for the wound, facilitating greater direct contact with the wound bed and increased ability to manage exudate effectively, protecting the wound edge and reducing the risk of maceration (Waite et al, 2016).

PRACTICAL BENEFITS TO PATIENT AND CLINICIAN

In a survey of over 2,000 patients (Price et al, 2008), 40.3% reported pain at dressing change to be 'the worst part of living with a wound'. Unlike many other gel-based fibre dressings, BIOSORB Dressing is specifically designed with structural integrity to remain intact on removal. This helps minimise the risk of fibre shed, also reducing the risk of pain for patients at dressing change and providing a simple and straightforward removal for clinicians.

The dressing is also designed to conform closely to the wound, which limits the space available for bacterial growth, as shown by further *in vitro* study (Waite, 2016), which may reduce the risk of infection and further complication. In a series of case studies (Wounds International, 2017), clinicians and patients were highly satisfied with the use of BIOSORB Dressings. The dressing was very effective in managing excessive exudate, providing consistently high levels of absorbency and thus protecting surrounding skin from maceration. All of the patients in the study reported high levels of comfort when surveyed at dressing change, with the dressing found to be highly conformable to the wound and, in all cases, easy for the clinician to apply and remove. Moreover, in all cases, the patients reported decreased VAS pain scores with use of the dressing.

The exudate-handling capacity of the dressing decreases the risk of further problems to the patient, such as risk of maceration, as well as pain, infection, skin breakdown and increase in wound size (Wounds International, 2017). Exudate handling is also a crucial aspect to improving patient quality of life. Problems including leakage and malodour can cause patients to be affected by issues such as social isolation, psychological effects and low self-esteem (Barrett, 2015). Therefore, exudate handling is of paramount importance when considering many aspects of wound management and patient quality of life.

ECONOMIC BENEFITS OF USING BIOSORB DRESSING

The effective exudate-handling capacity of BIOSORB Dressing means that its potential wear time is one of the principle benefits of using the dressing in practice (Acelity, 2015). The innovative structure of the dressing and its demonstrated protection of the surrounding skin from further damage/complication helps provide an increased wear time (by 1-2 days), reducing both product costs and clinician time.

An evaluation report assessing dressing use in East Lancashire Hospitals NHS Trust (Houldsworth, 2017) found that BIOSORB Dressings had more effective exudate-handling capacity, along with improved ability to remove the dressing in one piece, than competitor products. Clinicians also noted the potential cost savings of this; the majority agreed that, based on their clinical experience, they would recommend BIOSORB

Dressings for formulary inclusion. The report estimated current annual spending on dressings at £33,403, which could be reduced by £5,679 if currently-used dressings were replaced with BIOSORB Dressings on a like-for-like basis.

A multi-centre Italian product evaluation (Acelity, 2015) assessed wear time of the dressing. BIOSORB Dressing was used on wounds of various aetiologies that had previously been treated with alternative gelling fibre dressings. In the majority of cases, the exudate-handling capability of BIOSORB Dressing enabled the wear time to be longer (by 1-2 days) than competitors.

During the two-week product evaluation, all clinicians reported an improvement in wound condition, increasing time to healing compared to previous dressings used. Based on the experience of using the product in practice, the majority of clinicians said that they would recommend BIOSORB Dressing for formulary inclusion.

BIOSORB DRESSING IN SUMMARY

If you were to explain to a colleague why you have chosen to use BIOSORB Gelling Fibre Dressing, what would you give as the main benefits?

- Significantly more absorbent than other competitors in the market, which may lead to increased wear time due to fewer dressing changes required
- Encourages a moist wound healing environment, conducive to autolytic debridement, and supports the healing process
- High vertical absorption of exudate protects the wound edge and surrounding skin from maceration
- Minimal shrinkage when in contact with wound exudate
- Designed to remain intact on removal
- Able to be used effectively in conjunction with compression therapy where necessary
- Soft and conformable dressing

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