Cytal Wound Matrix and MicroMatrix are engineered using ACell’s proprietary MatriStem™ UBM™ (Urinary Bladder Matrix) technology, which has been shown to facilitate the body’s ability to remodel site-appropriate tissue. The fully resorbable, porcine-derived UBM devices are designed to work independently or together to offer a wide range of treatment options for partial- and full-thickness wounds.

** If active infection is present, treat patient to resolve infection prior to device application.
† The decision of which techniques or products to use in a particular clinical application lies with the physician based on patient profile, particular circumstances surrounding the procedure, and previous clinical experiences.
‡ Based on Cytal® Wound Matrix 1-Layer device particulate mass conversion and safety data on file (TP-0012). Product usage quantity is a recommendation only and does not reflect wound depth, which may adjust product need.

This is a suggested guideline for wounds managed with ACell wound devices. The provided suggestions are not intended to supersede internal institutional protocols and sound clinical judgment.

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**Wound Management with Cytal and MicroMatrix**

1. **Conduct Initial Wound Inspection**
   - Assess for clinical signs and symptoms of infection (Purulent exudate, elevated temperature, and/or peripheral induration of edema)
2. **Evaluate Wound Depth**
   - Superficial | Partial-thickness | Full-thickness
3. **Select Appropriate ACell Wound Management Device**
   - MicroMatrix
     - Apply approx. 5 mg/cm², or as needed for complete wound coverage
   - Cytal
     - Hydrolyze and properly orient the device before applying directly to the wound
   - MicroMatrix & Cytal
     - Apply MicroMatrix before Cytal
4. **Secure with Non-adherent Primary Dressing**
5. **Ensure Moist Wound Environment**
   - Apply hydrogel for dry wounds or an absorptive dressing for wet wounds
6. **Apply Secondary Dressing**

---

**MicroMatrix**

- 20 mg MM020
- 30 mg MM030
- 60 mg MM060
- 100 mg MM100
- 200 mg MM200
- 500 mg MM500
- 1000 mg MM1000

---

**Cytal Wound Matrix 1-Layer**

- 3 x 3 cm WS0303
- 3 x 7 cm WS0307
- 7 x 10 cm WS0710
- 10 x 15 cm WS1015

---

**Cytal Wound Matrix 2-Layer**

- 5 x 5 cm WSM0505
- 7 x 10 cm WSM0710
- 10 x 15 cm WSM1015

---

**Cytal Wound Matrix 3-Layer**

- 5 x 5 cm WSR0505
- 7 x 10 cm WSR0710
- 10 x 15 cm WSR1015
- 16 x 25 cm WSR1625
- 16 x 35 cm WSR1635

---

**Cytal Wound Matrix 6-Layer**

- 5 x 5 cm WSX0505
- 7 x 10 cm WSX0710
- 10 x 15 cm WSX1015

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Learn More: [www.acell.com](http://www.acell.com)
Cytal Wound Matrix and MicroMatrix are engineered using ACell’s proprietary MatriStem UBM™ (Urinary Bladder Matrix) technology, which has been shown to facilitate the body’s ability to remodel site-appropriate tissue. The fully resorbable, porcine-derived UBM devices are designed to work independently or together to offer a wide range of treatment options for partial- and full-thickness wounds.

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**Learn More:** [www.acell.com](http://www.acell.com)
Selecting Which Device to Use

Determine Device Size

The following is a general guideline to assist you in determining the amount of product needed for your patient. More product may be needed depending on the complexity and depth of the wound, as well as your follow up care plan.

Determine Device Thickness

The thinner the device, the longer it will persist on the woundbed. Having a thicker configuration may be advantageous: for deep wounds with more tissue loss. Thicker devices will take longer to resorb and may reduce moisture loss. Thicker devices may be advantageous for superficial wounds, providing conformability with shorter resorption times.

Determine Device Persistence

Determine Device Thickness

The thinnest the device, the longer it will persist on the woundbed. Having a thicker configuration may be advantageous: for deep wounds with more tissue loss. Thicker devices will take longer to resorb and may reduce moisture loss. Thicker devices may be advantageous for superficial wounds, providing conformability with shorter resorption times.

Cytal® Wound Matrix

Divide the surface area of the wound by the total sheet area diameter:

- 3 x 3 cm = 0.09 cm² coverage
- 5 x 5 cm = 0.25 cm² coverage
- 7 x 7 cm = 0.49 cm² coverage
- 10 x 10 cm = 0.10 cm² coverage
- 12 x 12 cm = 0.14 cm² coverage
- 14 x 14 cm = 0.19 cm² coverage

Note: Refer to the approved device labeling IFU (instructions for use) for the full list of wound indications.

Cytal Wound Matrix 6-Layer Sheet

- Full-thickness wounds
- Stage III & IV pressure injuries

Cytal Wound Matrix 3-Layer Sheet

- Full-thickness wounds
- Traumatic wounds with exposed bone

Cytal Wound Matrix 2-Layer Sheet

- Full-thickness wounds
- Donor site repairs

Cytal Wound Matrix 1-Layer Sheet

- Full-thickness wounds
- Superficial to moderate wounds
- Surgical resection
- Primary wound closure

MicroMatrix* Wound Matrix

Use approximately 5 mg per cm² for complete wound bed coverage:

- 100 mg = 20 cm² coverage
- 200 mg = 40 cm² coverage
- 400 mg = 80 cm² coverage
- 1000 mg = 200 cm² coverage

Tip

When using concomitantly, apply MicroMatrix before you apply the Cytal Wound Matrix sheet. MicroMatrix will fill into irregular, tunneling, and undermining wound bed surfaces, and resorb faster than the Cytal sheet device.

How to Properly Open the MicroMatrix Cap

1. Lift the edge of the instant seal at the back of the vial.

2. Pull the rubber tab down the sides of the cap, gently pull it to the right and strip off the cap. Discard the cap and remove the rubber stopper. Excess product may be trapped in the rubber stopper. The vial should be slightly overlapped to account for any product loss due to packaging.

Note: Clean up the vial with metal objects on handle in any way that may cause the glass to break.

MicroMatrix®

* Refer to the approved device labeling IFU (instructions for use) for the full list of wound indications.

4. Device Application

MicroMatrix

Apply the powder or paste directly to the wound bed, covering the entire wound with an even distribution of product. Always apply MicroMatrix first if also using Cytal.

Cytal

Apply the device(s) directly to the wound. Excess product that overlaps healthy tissue may be left in place. Cytal may be secured by sutures, staples, or dressings, if necessary.

Note: For larger wounds, more than one Cytal sheet may be necessary to obtain complete coverage. Slightly overlap device edges to ensure complete wound coverage.

5. Wound Dressing

Primary Dressing

Cover the device(s) with a non-adherent dressing. The dressing may be secured or stapled in place to protect the device. The wound is dry or in an area that prone to dryness, apply a moisture-adding dressing such as hydrogel to sufficiently hydrate the wound. If the wound is heavily exudative, apply an absorbent dressing on top of the non-adherent dressing.

Secondary Dressing

Secure the primary dressing in place with a secondary dressing that will bolster and protect the wound.

How to Manage the Wound Post-device Application

• In accordance with the AICCA, inspect the wound/primary dressing at least 7 days when using Cytal (alone) or Cytal and MicroMatrix (concurrently). Inspect the wound/primary dressing every 2 days when using MicroMatrix only.

• The wound may have an unpleasant odor and form a caramel-colored gel as the product absorbs into the wound.

• Keep the wound area moist throughout the healing process.

• Gently dressing changes, gently remove the wound area to remove exudate, but leave the caramel-colored gel intact.

• As needed, reaply product to areas where the device is no longer visible and further remodeling is desired.

• Reposition the wound areas follow up process as needed until the wound has epithelialized or desired outcome has been achieved.
Selecting Which Device to Use

Intended to provide tailored wound management options for your patient, ACell’s comprehensive product portfolio offers drains in multiple sizes and thicknesses. Use the following guidelines to help you select the device best suited for your patient’s case. For specific questions, please contact your ACell representative.

Determine Device Size

The following is a general guideline to assist you in determining the amount of product needed for your patient. More product may be needed depending on the complexity and depth of the wound, as well as your follow up care plan.

### CytaL Wound Matrix

- Divide the surface area of the wound by the total sheet area balance.
- Determine which device to use.
- Tip: When using concomitantly, apply MicroMatrix before you apply CytaL.

### MicroMatrix

- Use approximately 5 mg/cm² for complete wound bed coverage.
- Thicker devices will take longer to resorb and may reduce the need for multiple applications and dressing changes. Thicker devices may be advantageous for superficial wounds, providing conformability with shorter resorption times.

**Determine Device Thickness**

The thicker the device, the longer it will persist in the wound bed. Having a thicker or thicker device may be advantageous for deep wounds with more tissue loss. Thicker devices will take longer to resorb and may reduce the need for multiple applications and dressing changes. Thicker devices may be advantageous for superficial wounds, providing conformability with shorter resorption times.

### Product

- **MicroMatrix Powder**
- **MicroMatrix Flat Sheet**
- **CytaL 1-Layer Sheet**
- **CytaL 3-Layer Sheet**
- **CytaL 6-Layer Sheet**

### Tip

- When using concomitantly, apply MicroMatrix before you apply CytaL Wound Matrix Sheet. MicroMatrix will fit into irregular, tunneling, and undermining wound bed surfaces, and wounds faster than the CytaL device.

### How to Manage the Wound Post-device Application

#### 1. Wound Bed Preparation**

Before using ACell’s wound management device, the wound must first be debrided of necrotic or non-viable tissue and any infection must be managed.

#### 2. Device Preparation

**MicroMatrix**

- The product may be applied dry or may be mixed with saline to form a paste. A paste may be helpful for wounds that are difficult to access or where dry application would not be possible. To hydrate, slowly add sterile saline until desired consistency is obtained.

**CytaL**

- Hydrate the device with room temperature sterile saline or Ringer’s solution.

#### 3. Device Orientation

- **CytaL**: When the notched edge is in the upper right corner, the smooth basement membrane side of the device is facing up. Place the basement membrane side of the wound up and the lamina propria side on the wound.
- **Note**: Device orientation is not applicable for CytaL 1-Layer sheet due to faster resorption rate.

#### 4. Device Application

**MicroMatrix**

- Apply the powder or paste directly to the wound bed, covering the entire wound with an even distribution of product. Always apply MicroMatrix first if also using CytaL.

**CytaL**

- Apply the device directly to the wound. Excess product that overlaps healthy tissue may be left in place. CytaL may be secured by sutures, staples, or dressings, if necessary.

**Note**: For large wounds, more than one CytaL sheet may be necessary to obtain complete coverage. Slightly overlap device edges to ensure complete wound coverage.

### How to Properly Open the MicroMatrix Cap

1. Lift the edge of the inset circle tab at the back of the arrow.
2. Pull the blue metal tab in the direction of the arrow.
3. When pulling the tab, the tip of the cap gently pull the tip up and around the rim.
4. Discard the cap and remove the rubber stopper. Excess product may be trapped in the rubber stopper, the valve and cap overlaid to account for any product loss due to packaging.

**Note**: Clean the cap with metal objects on handles to avoid any pressure that may cause the glass to break.

### 5. Wound Dressing

**Primary Dressing**

Cover the device(s) with a non-adherent dressing. The dressing may be soaked or stapled in place to protect the device. If the wound is dry or in a area that prone to drainages, apply a moisture-adding dressing such as hydrogel to sufficiently hydrate the wound. If the wound is heavily exudative, apply an absorbent dressing on top of the non-adherent dressing.

**Secondary Dressing**

Secure the primary dressing in place with a secondary dressing that will bolster and protect the wound.
Selecting Which Device to Use

Intended to provide tailored wound management options for your patient, ACell’s comprehensive product portfolio offers devices in multiple sizes and thicknesses. Use the following guidance to help you select the device best suited for your patient’s case. For specific questions, please contact your ACell Representative.

Determine Device Size

The following is a general guideline to assist you in determining the amount of product needed for your patient. More product may be needed depending on the complexity and depth of the wound, as well as your follow up care plan.

**Cytal** Wound Matrix

<table>
<thead>
<tr>
<th>Divides the surface area of the wound by the total sheet area Below:</th>
<th>Configurations</th>
<th>Persistence in the Wound Bed</th>
<th>Wound Depth</th>
<th>Potential Examples of Wound Type‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>MicroMatrix Particulate</td>
<td>Shortest</td>
<td>Superficial to deep, thin/thickness wounds</td>
<td>Irregular, tunneling, and undermining wounds</td>
<td></td>
</tr>
<tr>
<td>Cytal Wound Matrix 1-Layer Sheet</td>
<td>Superficial to partial thickness wounds</td>
<td>Donor site repairs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cytal Wound Matrix 2-Layer Sheet</td>
<td>Deep, partial-thickness wounds and second degree burns</td>
<td>Surgical resection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cytal Wound Matrix 3-Layer Sheet</td>
<td>Full-thickness wounds</td>
<td>Traumatic wounds with exposed bone, tendon, or hardware</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cytal Wound Matrix 4-Layer Sheet</td>
<td>Full-thickness wounds and severe second degree burns</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MicroMatrix**

| Use approximately 5 mg per cm² for complete wound bed coverage |
|---|---|---|---|---|
| 100 x 20 cm² coverage | 200 mg - 40 cm² coverage | 400 mg - 100 cm² coverage | 1000 mg - 200 cm² coverage |

Determine Device Thickness

The thicker the device, the longer it will persist in the wound bed. Having an appropriate thickness may be advantageous for deep wounds with more tissue loss. Thicker devices will take longer to resorb and may reduce the need for multiple applications and dressing changes. Thinner devices may be advantageous for superficial wounds, providing conformability with fewer necrosis recurrence times.

**Tip**

When using concomitantly, apply MicroMatrix before you apply the Cytal Wound Matrix sheet. MicroMatrix will fit into irregular, tunneling, and undermining wound bed surfaces, and resorb faster than the Cytal sheet device.

**How to Properly Open the MicroMatrix Cap**

1. Lift the edge of the insert tab at the back of the arrow.
2. Pull the tab until the side of the cap gently pulls to the right and around the rim.
3. Discard the cap and remove the rubber stopper. Excess product may be trapped in the rubber stopper. The vials are slightly overfilled to account for any product loss due to packaging.
4. Discard the cap and remove the rubber stopper. Excess product may be trapped in the rubber stopper.

**How to Manage the Wound Post-device Application**

**1. Wound Bed Preparation**

Before using ACell’s wound management devices, the wound must first be debrided of necrotic or non-viable tissue and any infection must be managed.

**2. Device Preparation**

**MicroMatrix**

The product may be applied dry or may be mixed with saline to form an acute paste. A paste may be helpful for wounds that are difficult to access or where dry application would be not possible. To hydrate, slowly add sterile saline until desired consistency is obtained.

**Cytal**

Hydrate the device(s) with room temperature, sterile saline or Ringer’s solution.

- Cytal 1- or 2-Layer – approximately 2 minutes to hydrate
- Cytal 3- or 4-Layer – approximately 5 minutes to hydrate

**Note:** Cytal sheets may be cut to fit irregular shaped wounds prior to hydrating the device.

**3. Device Orientation**

**Cytal**

When the notched edge is in the upper right corner, the smooth basement membrane side of the device is facing up. Place the basement membrane side of the wound and the lamina propria side on the wound. 

**Note:** Device orientation is not applicable for Cytal 1-Layer sheets due to faster resorption rate.

**MicroMatrix**

Cytal devices may be sutured or stapled in place to protect the device. If the wound is dry or in an area that is prone to dryness, apply a moisture-adding dressing such as hydrogel to sufficiently hydrate the wound. If the wound is heavily exudative, apply an absorptive dressing on top of the non-adherent dressing.

**Secondary Dressing**

Secure the primary dressing in place with a secondary dressing that will bolster and protect the wound.

**How to Apply**

1. **Primary Dressing**

Cover the device(s) with a non-adherent dressing. The dressing may be secured or stapled in place to protect the device. If the wound is dry or in an area that is prone to dryness, apply a moisture-adding dressing such as hydrogel to sufficiently hydrate the wound.

2. **Secondary Dressing**

Secure the primary dressing in place with a secondary dressing that will bolster and protect the wound.

**4. Device Application**

**MicroMatrix**

Apply the powder or paste directly to the wound bed, covering the entire wound with an even distribution of product. Always apply MicroMatrix first if also using Cytal.

**Cytal**

Apply the device(s) directly to the wound. Excess product that overlaps healthy tissue may be left in place. Cytal may be secured by sutures, staples, or débridement, if necessary.

**Note:** For larger wounds, more than one Cytal sheet may be necessary to obtain complete coverage. Slightly overlap device edges to ensure complete wound coverage.

**5. Wound Dressing**

**Primary Dressing**

Cover the device(s) with a non-adherent dressing. The dressing may be secured or stapled in place to protect the device. If the wound is dry or in an area that is prone to dryness, apply a moisture-adding dressing such as hydrogel to sufficiently hydrate the wound. If the wound is heavily exudative, apply an absorptive dressing on top of the non-adherent dressing.

**Secondary Dressing**

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Wound Management with Cytal and MicroMatrix

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### MicroMatrix

<table>
<thead>
<tr>
<th>Weight (mg)</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>MM020</td>
</tr>
<tr>
<td>30</td>
<td>MM030</td>
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<tr>
<td>100</td>
<td>MM100</td>
</tr>
<tr>
<td>150</td>
<td>MM150</td>
</tr>
</tbody>
</table>

### Cytal Wound Matrix

**Conduct Initial Wound Inspection**
Assess for clinical signs and symptoms of infection (painless exudate, elevated temperature, and/or peripheral induration of edema)

**Cleanse Wound & Debride Necrotic Tissue**

**Assess Wound Depth**
Superficial | Partial-thickness | Full-thickness

**Select Appropriate ACell Wound Management Device**

**Cytal**
Hydrate and properly orient the device before applying directly to the wound

**MicroMatrix & Cytal**
Apply MicroMatrix before Cytal

**Secure with Non-adherent Primary Dressing**

**Ensure Moist Wound Environment**
Apply hydrogel for dry wounds or an absorptive dressing for wet wounds

**Apply Secondary Dressing**

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Learn More: [www.acell.com](http://www.acell.com)

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