**What is mitomycin C?**

Mitomycin C (MMC) is a NIOSH-recognized hazardous drug (HD) and a cytotoxic agent which inhibits the multiplication of cells. It is also a vesicant with the potential to cause extensive tissue damage and blistering if mishandled.

Extended exposure, including inhalation or direct skin contact, may lead to negative side effects such as irritated skin, birth defects, and cancer.

MMC is unstable once reconstituted in solution, making the delivery of the prescribed concentration difficult.

**Why is MMC used in ophthalmic surgery?**

During glaucoma surgery, a fistula is created, allowing aqueous humor to drain from the eye. As a normal course of action, the body will attempt to heal this wound. MMC has been proven to be an effective agent in preventing the scarring that would close the wound, thereby increasing long-term surgical success.

**What safety policies are associated with handling HDs?**

USP <800> emphasizes training for all staff involved with HDs, especially nurses. The Chapter specifies requirements for handling and disposing of HDs, stating:

- CSTDs must be used for administration when the dosage form allows.
- Personal protective equipment (PPE) must be worn, removed, and disposed of in an approved HD waste container at the site of drug administration.

For the full list of safety policies associated with HDs, review USP <800>.

**What is Mitosol®?**

Mitosol® (mitomycin for solution) 0.2 mg/vial Kit for Ophthalmic Use is the only FDA-approved ophthalmic formulation of MMC. The kit contains a closed-system transfer device and sponge tray enabling the safe reconstitution and transfer of MMC.

**How is Mitosol® used?**

The vial of lyophilized MMC powder is reconstituted on the sterile field with subsequent closed transfer to the sponge tray.

Mitosol® should be used within one hour of reconstitution. Sponges provided within the Mitosol® kit should be fully saturated with the entire reconstituted contents as prescribed in the Instructions For Use. The sponge(s) should be applied to the treatment area for two minutes.

*See USP <800> at www.usp.org/usp-nf/notices/general-chapter-hazardous-drugs-handling-healthcare-settings*
Compounded drugs may NOT offer assured drug sterility, as they are not subject to the rigorous manufacturing standards of FDA-approved drugs.

This is evidenced by the New England Compounding Center tragedy in which contaminated drugs resulted in 64 deaths and 750 debilitated individuals.

Since the incident in 2012, there has been a sharp climb in federal inspections and safety citations of compounding pharmacies. (Figure 1)

Mitosol® offers peace of mind.

<table>
<thead>
<tr>
<th>Benefits of Mitosol® FDA Approval</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets FDA standards for potency and purity</td>
<td>✓</td>
</tr>
<tr>
<td>Prepared and dispensed according to FDA-approved labeling</td>
<td>✓</td>
</tr>
<tr>
<td>Manufactured and audited to FDA-regulated current Good Manufacturing Practices</td>
<td>✓</td>
</tr>
</tbody>
</table>

Mitosol’s® FDA approval provides the assurance of federal oversight of all aspects of manufacturing and delivery, ensuring the same stable sterile product is provided every time.

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10 Ways Mitosol® Defines Convenience

1. Includes a sterile procedural kit to reconstitute mitomycin C (MMC) at the time of use.
2. Extended 2-year shelf life.
3. Turnkey system: preparation, use, delivery, and disposal.
4. Room temperature storage - No refrigeration.
5. Requires no light-shielding.
6. Requires no advance prescription.
7. Eliminates case cancellations or rescheduling due to outdated or absent MMC.
8. Pre-cut sponges speed preparation & eliminate scissor cut fragments.
9. Reduces OR, staff, & physician downtime.
10. Eliminates rushed preparation for last-minute cases.

Mitosol®: Ready-when-you-are convenience when handling MMC.
Why risk non-compliance when a simple solution is available?

The Progressive Trend of Regulations to Ensure Safety and Sterility

Summary of Regulations

- No essential copies of commercially available products.
- Closed System Transfer Devices/PPE to be required when handling HDs.
- Good Manufacturing Practice production requirements.

Mitosol® is...

- In compliance with federal & state laws, as well as multiple society guidelines.
- The only FDA-approved formulation of ophthalmic MMC.
- Packaged with a Closed-System Transfer Device (CSTD).
- Does not require an advanced prescription.

Mitosol® makes compliance simple.
8 million health care professionals a year are exposed to HDs in the work place\(^1\).

- Exposure side effects can range from temporary rashes to lifelong complications.

Mitomycin C is on the list of NIOSH-recognized HDs.

- MMC is cytotoxic, mutagenic, and carcinogenic with its hazards existing in all forms (as dry powder, in solution, and vapors from solution).

Health organizations have stressed the problem of HD exposure.

- Guidelines established by ASHP, NIOSH, U.S. Pharmacopeia, and others call for the use of Closed-System Transfer Devices (CSTDs) and personal protective equipment when handling HDs.

Mitosol\(^\circledR\) reduces the risk of MMC exposure.

- Mitosol\(^\circledR\) is FDA-approved MMC packaged with a CSTD and sponge tray designed to deliver MMC safely to the point of application during ophthalmic surgery.

Mitosol®

Reduce Variables
Compounded MMC makes it difficult to achieve a consistent dose.

MMC degrades rapidly\(^1\) and its potency depends on a variety of variables:
- Where it is stored.
- Shipping conditions.
- Elapsed time since compounding.
- Variability in compounding each dose to the next.

Take Control
Mitosol® ensures identical potency for every patient.

Mitosol® is shelf-ready and ALWAYS at time zero. It is reconstituted on the sterile field at the time of use, reassigning control of drug potency to those actually administering it.

Deliver Consistency

\[0.1\%\]
Percentage of compounded MMC degradation per hour

\[25\%\]
Percentage of compounded MMC potency that can be lost

\[0\]
Number of times you will worry about Mitosol® consistency & potency

\(^1\) Degradation of Mitomycin Under Various Storage Conditions; Kinast RM, Mansberger SL; Poster 83-111; AGS 2014
Mitosol® delivers cost effective compliance, containment, consistency, and convenience.

What’s the difference between cost and price?

Added Costs
- Canceled cases
- Cost of replacing expired MMC
- Lost productivity
- Dry ice shipping cost
- Compliance infractions

Price
- Acquisition Cost

Mitosol® mitigates these costs, and with affordable volume based pricing, Mitosol® continues to be the safest, most compliant, and most cost effective value on the market.
**INDICATION**
Mitosol® (mitomycin for solution) 0.2 mg/vial Kit for Ophthalmic Use is an antimetabolite indicated as an adjunct to ab externo glaucoma surgery.

**Dosage & Administration**
Mitosol® is intended for topical application to the surgical site of glaucoma filtration surgery and must be reconstituted prior to application. Sponges provided within the Mitosol® kit should be fully saturated with the entire reconstituted contents in a manner prescribed in the Instructions For Use. The sponge(s) should be applied to the treatment area for two minutes. Reconstituted Mitosol® should be used within one hour of reconstitution.

**IMPORTANT SAFETY INFORMATION**

**Contraindications**
Mitosol® is contraindicated in patients that have demonstrated a hypersensitivity to mitomycin and in women who are or may become pregnant during therapy.

**Warnings & Precautions**

- **Cell Death**, mitomycin is cytotoxic. Use of mitomycin in concentrations higher than 0.2mg/mL or use for longer than 2 minutes may lead to unintended corneal and/or sclera damage including thinning or perforation. Direct contact with the corneal endothelium will result in cell death.
- **Hypotony**. The use of mitomycin has been associated with an increased instance of post-operative hypotony.
- **Cataract Development**. Use in phakic patients has been correlated to higher instance of lenticular change and cataract formation.

**Adverse Events & Reactions**
The most frequent adverse reactions to Mitosol® occur locally and include hypotony, hypotony maculopathy, blebitis, endophthalmitis, vascular reactions, corneal reactions, and cataract.

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### Mitosol® Facts

<table>
<thead>
<tr>
<th>Feature</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDA-Approved for Ophthalmology</td>
<td>✔</td>
</tr>
<tr>
<td>Assured Sterility, Potency, Dosing</td>
<td>✔</td>
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<tr>
<td>AORN Compliant Sterile Transfer</td>
<td>✔</td>
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<tr>
<td>Closed Fluid Transfer</td>
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<tr>
<td>Room Temp Storage</td>
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<tr>
<td>cGMP Manufacturing Controls</td>
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<tr>
<td>Detailed Instructions for Use</td>
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<tr>
<td>NIOSH Compliant Disposal</td>
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<tr>
<td>No “Black Box Warning”</td>
<td>✔</td>
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<tr>
<td>Shelf Life up to 24 months</td>
<td>✔</td>
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