

Medical Safety Information

Pharmaceuticals and Medical Devices Agency

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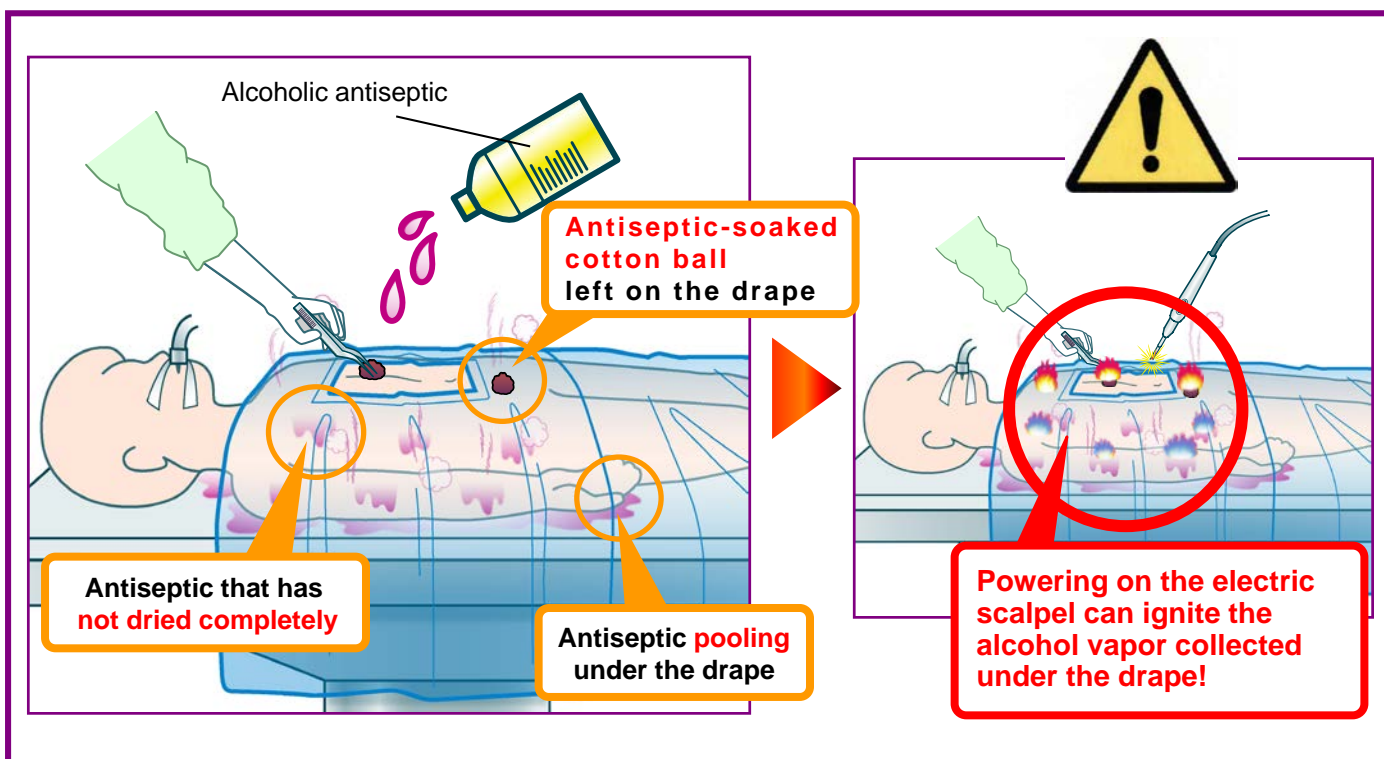
Precautions in Handling of Electric Scalpels (Part 2)

POINT Key points for safe use

(Case 1) A spark from an electric scalpel ignited alcohol vapor from an alcoholic antiseptic or liquid bandage, leaving the patient with burns.

1 Precautions when using an alcoholic antiseptic

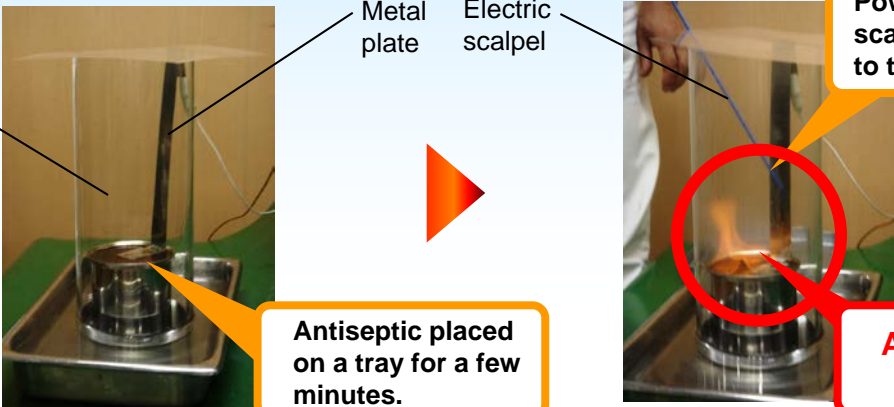
- Alcoholic antiseptics (containing ethanol or isopropanol) are **flammable**. Make sure the antiseptic has dried completely.



With the use of a lot of antiseptic, the antiseptic that has seeped into the drape or left on the mattress generates a flammable alcohol vapor. Be careful! The invisible flame of ignited alcohol is difficult to recognize.



Photo evidence: alcohol flash fire



Powered-on electric scalpel is held close to the antiseptic.

Alcohol vapor ignited!

Labels: Glass container, Metal plate, Electric scalpel

Antiseptic placed on a tray for a few minutes.

Alcoholic antiseptic

ISODINE FIELD SOLUTION 10%



(Case of using antiseptic solution only)

ISODINE FIELD SOLUTION 10%



(Case of using antiseptic-soaked cotton ball)

0.5% chlorhexidine-ethanol solution



(Case of using antiseptic-soaked cotton ball)

Non-alcoholic antiseptic

BONGOL Solution 10%



(Case of using antiseptic solution only)

Just holding the electric scalpel close to the alcoholic antiseptic (not contacting) can easily ignite the alcohol vapor.

Non-alcoholic antiseptic cannot be ignited.

(The Technology Division, Surgical Scalpels Committee, JAMDI assisted in this experiment)

* Videos of these experiments are also available.

JAMDI <http://www.jamdi.org/anzen/index.html>

In principle, avoid using an electric scalpel when using alcoholic antiseptics or alcohol-diluted antiseptics. If the use of an electric scalpel is required, consider using a non-alcoholic antiseptic.



The following antiseptics have been associated with fire ignition incidents caused by combination use of antiseptics and electric scalpels. **Exercise adequate caution when using such antiseptics with a product name (brand name) that does not include the term “ethanol” or “alcohol” !**



<p>Meiji Seika Pharma Co., Ltd.</p>  <p>ISODINE FIELD SOLUTION 10%</p>	<p>Yoshida Pharmaceutical Co., Ltd.</p>  <p>Popiyodon Field 10%</p>	<p>Maruishi Pharmaceutical Co., Ltd.</p>  <p>PREPODYNE field 1%</p>
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[Precaution for application]
This product contains ethanol. Make sure it has dried and that alcohol vapor is dispersed before using an electric scalpel. In particular, when using a drape or the like, liquid residue of this product may generate ethanol vapor that collect under the drape, which can easily lead to a flash-fire hazard.

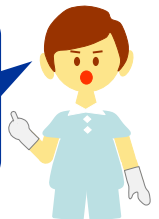
← **Precautions such as shown on the left are described in package inserts of alcoholic antiseptics.**

(Excerpt from the package insert of ISODINE FIELD SOLUTION 10% by Meiji Seika Pharma Co., Ltd.)

*This part is indicated in Japanese.

2 Fire ignition by other than alcoholic antiseptics

There were cases of fire ignition to the liquid bandages or bone cements caused by combination use of electric scalpels. Make sure to check the package inserts for product flammability if an electric scalpel is used near such products.



Example of liquid bandage



**SUREPREP NO-STING
Skin Barrier Film**
(Medline Japan G.K.)



**Cavilon No Sting Barrier Film Spray
Cavilon No Sting Barrier Film Wipe**
(3M Health Care Limited)



**NO-STING SKIN-PREP Spray
NO-STING SKIN-PREP Swabs
NO-STING SKIN-PREP Wipes**
(Smith & Nephew Wound Management KK)

About this information

- * PMDA Medical Safety Information is issued by the Pharmaceuticals and Medical Devices Agency for the purpose of providing healthcare providers with clearer information from the perspective of promoting the safe use of pharmaceuticals and medical devices. The information presented here has been compiled, with the assistance of expert advice, from cases collected as Medical Accident Information Reports by the Japan Council for Quality Health Care, and collected as Adverse Drug Reaction and Malfunction Reports in accordance with the Pharmaceutical Affairs Law.
- * We have tried to ensure the accuracy of this information at the time of its compilation but do not guarantee its accuracy in the future.
- * This information is not intended to impose constraints on the discretion of healthcare professionals or to impose obligations and responsibility on them, but is provided as a support to promote the safe use of pharmaceuticals and medical devices by healthcare professionals.