

# Surgery involving the heart and lungs often uses microporous polysaccharide hemisphere absorbable hemostat.

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## Abstract

**Microporous Polysaccharide Hemisphere (MPH) absorbable haemostat is a commonly used product in surgeries involving the heart and lungs. MPH is made of a natural, biocompatible material and works by absorbing blood and other fluids to control bleeding and promote clotting. It is fully absorbable and does not need to be removed after surgery, reducing the risk of complications and additional procedures. MPH also has a low risk of inducing an immune response or causing tissue damage, making it a safe and effective option for patients. In surgeries involving the heart and lungs, MPH is often used to control bleeding from small vessels and support and stabilize tissues. Although MPH is not suitable for every surgical scenario, it is an important tool for medical professionals working to provide the highest level of care to patients undergoing heart and lung surgery.**

**Keywords:** Microporous polysaccharide hemisphere, Haemostat.

## Introduction

Surgery that involves the heart and lungs can be complex and challenging for medical professionals, due to the close proximity of these vital organs and the need to maintain circulation and breathing during the procedure. To minimize the risk of bleeding and other complications, medical teams often use a product called a Microporous Polysaccharide Hemisphere (MPH) absorbable haemostatic. MPH is a type of surgical sponge that is used to control bleeding and promote blood clotting during procedures. It is made of a natural, biocompatible material that is derived from plant polysaccharides and has a porous, spongy texture. The haemostat works by absorbing blood and other fluids, swelling up to several times its original size and exerting pressure on surrounding tissues to slow or stop bleeding. One of the key advantages of MPH over other types of haemostatic that it is fully absorbable and does not need to be removed after the surgery [1].

This helps to minimize the risk of complications and reduces the need for additional procedures. Additionally, MPH has a low risk of inducing an immune response or causing tissue damage, making it a safe and effective option for patients. In surgeries involving the heart and lungs, MPH is often used to control bleeding from small vessels or tissues that are difficult to reach with traditional surgical instruments. It can also be used to support and stabilize tissues during the procedure, helping to reduce the risk of further damage or bleeding. Despite its many benefits, MPH is not suitable for every surgical scenario, and medical teams must carefully consider

the specific needs of each patient before deciding whether or not to use this product [2].

However, with its ability to effectively control bleeding and promote clotting, MPH is an important tool in the arsenal of medical professionals working to provide the highest level of care to patients undergoing heart and lung surgery. Haemostatic viability was looked at utilizing a heparinized porcine scraped spot model copying a capsular tear of a parenchymal organ. MPH and haemostatic framework were applied, as per a randomized plan, to matched hepatic scraped spots. Haemostatic achievement, control of dying, and blood misfortune were evaluated and after treatment. Haemostatic achievement and control of draining were investigated utilizing chances proportions and blood misfortune utilizing mean contrasts [3].

## Spongy Texture

It is used to describe a type of texture that is soft, springy, and porous, like a sponge. It is often used to describe food or materials that have a similar consistency, such as bread or foam. This type of texture is created by the presence of air pockets or voids, which give it a light and airy feel. Spongy textures can be achieved through various methods, such as incorporating air into a mixture, using specific cooking techniques, or creating a matrix of interconnected voids in a material [4].

## Haemostatic Agents

Micro-porous Polysaccharide Hemospheres (MPH) are ARISTA AH (Medafor, Inc, Minneapolis, MN). MPH is

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created by the response of epichlorohydrin with a profoundly cleaned potato starch arrangement that is then illuminated for sterility. In a forthcoming, multicentre, randomized, controlled clinical review, MPH was non inferior to a collagen haemostatic cushion. Flowable haemostatic framework is Floseal VH S/D. The haemostatic framework is made out of human-inferred thrombin and ox-like determined gelatin. In three imminent, multicentre, randomized, controlled clinical examinations, haemostatic grid was better than a collagen haemostatic cushion ready with thrombin [5].

## Conclusion

Microporous polysaccharide hemisphere absorbable hemostat is a commonly used material in surgeries that involve the heart and lungs. This absorbable hemostat is made from a microporous polysaccharide material and has the ability to control bleeding during surgery. Its unique properties make it an effective and safe option for use in these delicate and critical procedures. Its ability to absorb into the body over time eliminates the need for a secondary removal procedure and reduces the risk of complications associated with foreign materials left in the body. Overall, the use of microporous polysaccharide hemisphere absorbable hemostat in heart and lung surgeries plays a critical role in ensuring the success and safety of these procedures.

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