



**AcuClot™**  
Rapid Bleeding Control



# AcuClot

## Biopolymer Based Haemostatic Sponge

AcuClot is an advanced hemostatic sponge, designed to stop Surgical/ Superficial bleeding. Based on **ActClot Technology (Activated Clotting Mechanism)**, the composition and structure accelerates blood coagulation cascade, resulting in **faster bleeding control**.

- ▼ Charge-based platelet aggregation, enhances blood coagulation (Ref. MOA).
- ▼ Due to its cationic nature, the sponge is bioadhesive and creates a mechanical seal at the wound and accelerates the natural process of blood clotting (Ref CH T: 1.2, 2.1).
- ▼ Microporous honeycomb structure, supports in higher (up to 40 times of sponge weight) and rapid blood absorption (Ref CH T: 1.1, 1.2).
- ▼ Sponge is based on Biopolymer\*, hence completely biodegradable



Acuclot hemostatic sponge is recommended for being used on:

- Heparinized Patients
- Friable Tissues
- Haemophilia Patients
- Trauma Injuries
- Operative Procedures
- Dental Extractions
- Dialysis Puncture Sites
- Catheter Sites



**QUICK**

Faster Time to Haemostasis



**EFFECTIVE**

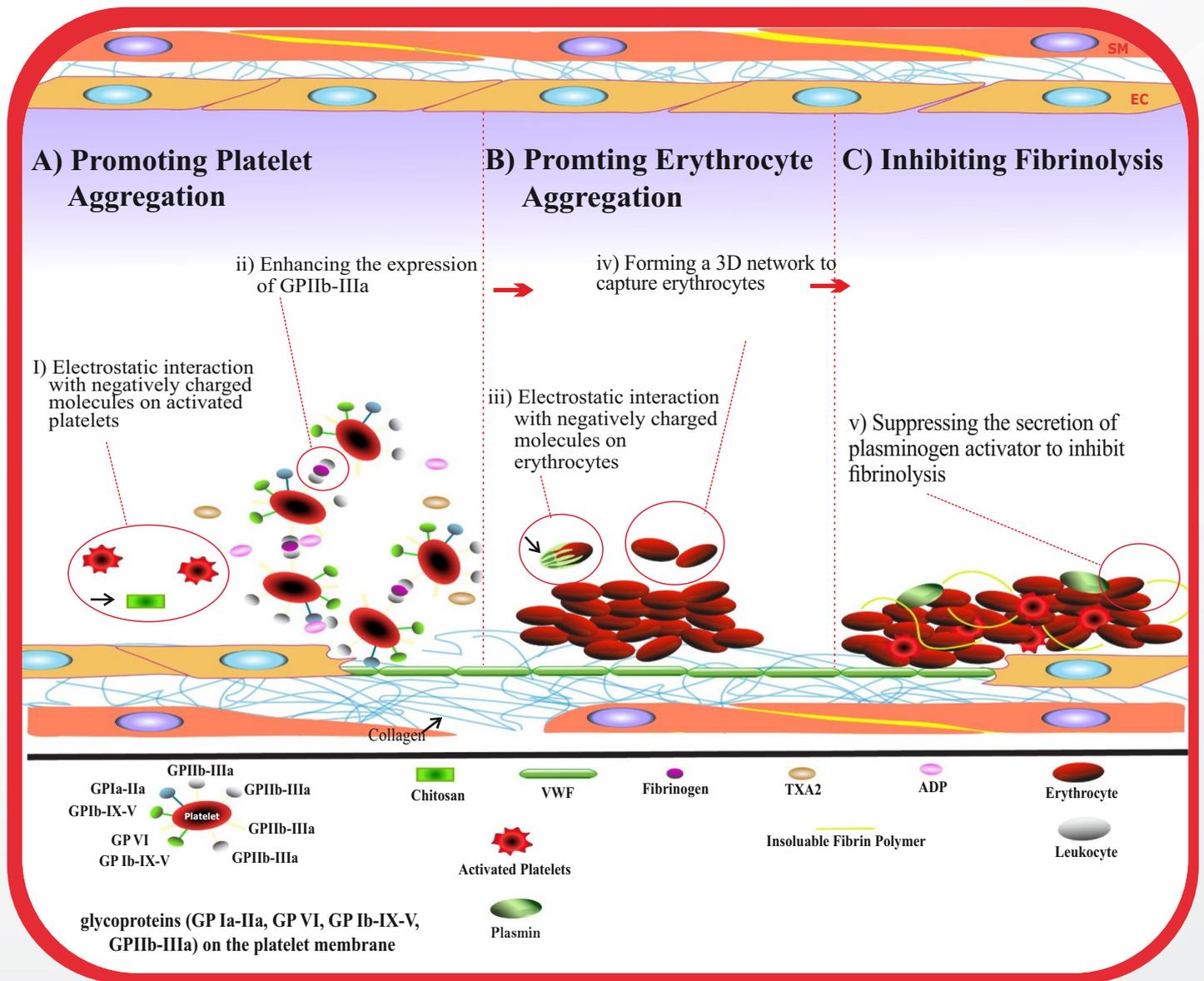
Robust Clot Formation



**EASY**

Every Second Counts

# Mechanism of Action:



**ActClot Technology: AcuClot plays a Haemostatic role by causing Platelet Aggregation and Inhibiting Fibrinolysis**

## References-

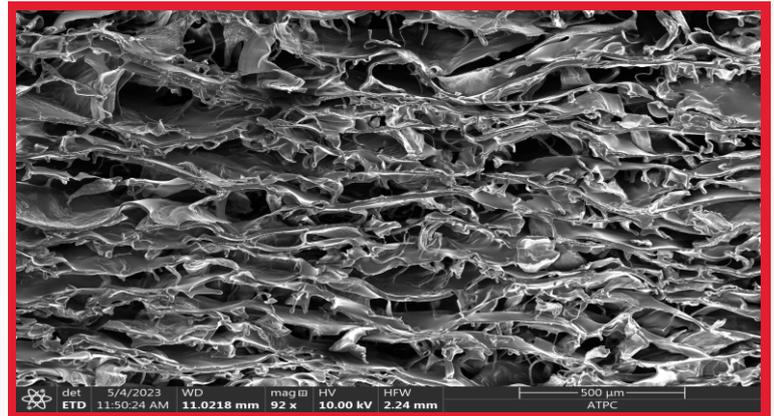
1. Bano, Ijaz; Arshad, Muhammad; Yasin, Tariq; Ghauri, Muhammad Afzal; Younus, Muhammad (2017). Chitosan: A potential biopolymer for wound management. *International Journal of Biological Macromolecules*, 102, 380–383.
2. Hu, Zhang; Zhang, Dong-Ying; Lu, Si-Tong; Li, Pu-Wang; Li, Si-Dong (2018). Chitosan-Based Composite Materials for Prospective Hemostatic Applications. *Marine Drugs*, 16(8), 273.
3. Chih-Hsin Wang; Juin-Hong Cherng; Chuan-Chieh Liu; Tong-Jing Fang; Zhi-Jie Hong; Shu-Jen Chang; Gang-Yi Fan; Sheng-Der Hsu; (2021). Procoagulant and Antimicrobial Effects of Chitosan in Wound Healing. *International Journal of Molecular Sciences*.
4. Smith, A. H.; Laird, C.; Porter, K.; Bloch, M. (2013). Haemostatic dressings in prehospital care. *Emergency Medicine Journal*, 30(10), 784–789.
5. Khoshmohabat, Hadi; Paydar, Shahram; Kazemi, Hossein Mohammad; Dalfardi, Behnam (2016). Overview of Agents Used for Emergency Hemostasis. *Trauma Monthly*, 21(1).

# Characterization Tests:

## AcuClot Haemostatic Sponge

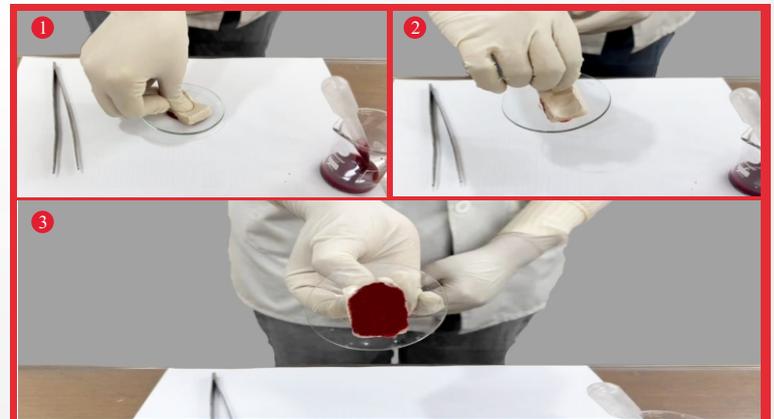
### 1. Microscopic Evaluation (SEM Analysis):

- 1.1 **Scanning Electron Microscopy** image showing highly porous matrix with a typical **honeycomb** microstructure (100-300  $\mu\text{m}$ ).
- 1.2 Uniform porosity allows it to **rapidly absorb** and block plasma during haemostasis.



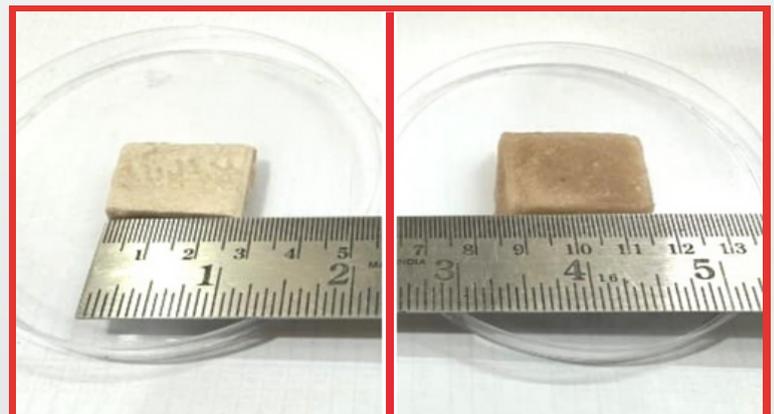
### 2. Bioadhesiveness:

- 2.1 **AcuClot's cationic** nature enables it to **adhere strongly** to the surface.
- 2.2 Strong bioadhesive forces create a **mechanical seal** accelerating the natural mechanism of blood clotting.



### 3. Absorbency:

- 3.1 **AcuClot's** ability to absorb **liquid** is up to **40 times** its weight and its ability to absorb **blood** is about **15-20 times** its weight.

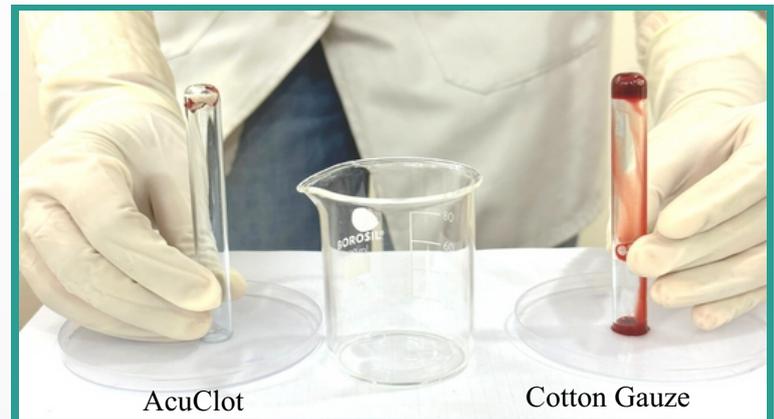


# Comparative Tests:

## AcuClot Vs Cotton Gauze

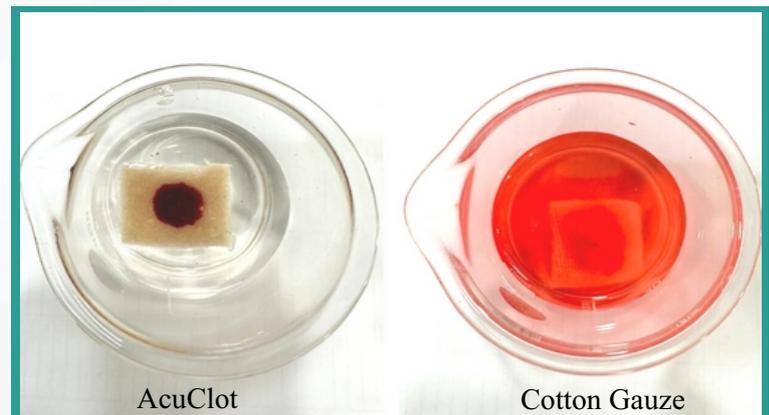
### 1. Whole Blood Clotting Time Study:

- 1.1 **AcuClot** quickly forms the blood clot and remains **adhered** to the test tube, unlike cotton gauze.
- 1.2 The formation of a blood clot is confirmed by **inverting** the tubes.



### 2. Haemolysis:

- 2.1 Blood cells that have not clotted are haemolyzed in water, giving them a characteristic **red colour**.
- 2.2 **AcuClot** does **not** show **haemolysis** as it forms a very strong clot showing its strength.



## How to Apply?



Open the pack and take out **AcuClot**.



Apply **AcuClot** to the bleeding site so that it completely covers it. Apply consistent pressure until **AcuClot** adheres to it.



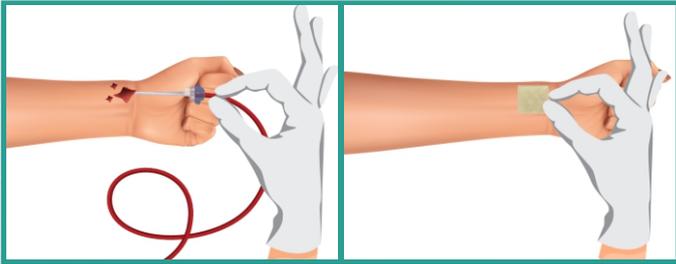
If necessary, use a secondary dressing to keep **AcuClot** in place.



Removal: Irrigate **AcuClot** thoroughly with water or saline & gently pull it away.

## Post Catheterization

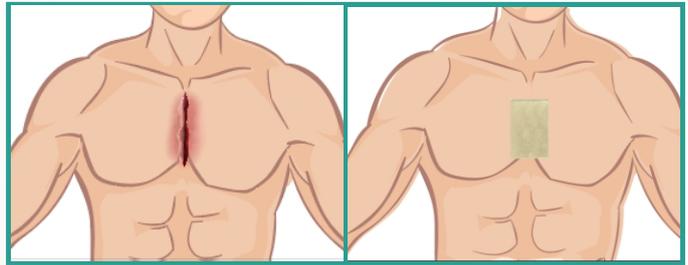
Catheter Sites, Dialysis Sites and Any Punctures



Variants: ACT0303 , ACT0505

## Operative Procedures

Surgical Incisions, Resections and Arterial Bleeds



Variants: ACT0104, ACT0106, ACT0108, ACT0505, ACT0808

## Dental Procedures

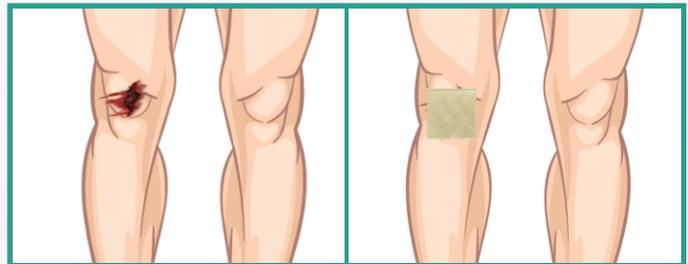
Oral Surgeries, Extraction Sockets and Multiple Tooth Extractions



Variants: ACT0101

## Trauma Injuries

Lacerations and Abrasions



Variants: ACT1010

## Ordering Information

APPLICATION	PRODUCT CODE	SIZE(cm)	UNITS PER BOX
Dental	ACT0101	1x1	20
Haemorrhoidectomy	ACT0104	1x4	20
Haemorrhoidectomy	ACT0106	1x6	20
Haemorrhoidectomy	ACT0108	1x8	20
Dialysis	ACT0303	3x3	5
Vascular/Surgical	ACT0505	5x5	5
Emergency/ Trauma	ACT0808	8x8	5
Military	ACT1010	10x10	5



Anziam Bio

Anziam Bio Private Limited

Bionest Bio-incubator, Regional Centre for Biotechnology, Gurgaon-Faridabad Expressway, Faridabad-121001  
 Anziam Bio Pvt LtdE-127B, Ground FloorNear Vande Mataram Chowk,RIICO Industrial Area, Bhiwadi, District- Alwar, Rajasthan 301019

+91-7982045562

care@anziam.com

linkedin.com/company/anziam-bio/

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