

SmartReactors

# Camouflage™

Coating Technology for

**Perfusion & Dialysis**



Transformative solutions to reduce thromboembolic complications and increase durability

[www.smartreactors.com](http://www.smartreactors.com)



### About Smart Reactors

Smart Reactors delivers cutting-edge hemocompatible coating technologies for medical devices. Services include coating selection, regulatory support, and commercialization.

Founded in 2019 by industry experts with over 50 years of combined experience, Smart Reactors excels in creating advanced biomaterial solutions and providing superb customer service.



### Camouflage™ Technology

Camouflage™ is an innovative coating technology tailored for blood-contacting medical devices. The coating conceals the device surface by using non-inflammatory proteins from the blood. The combination of recombinant protein and synthetic polymer regulates protein adsorption, preventing thrombosis (Fig 1). The non-pharmaceutical coating enables a streamlined regulatory pathway.

● Enhanced Hemocompatibility

● Long-term Durability

● Excellent Gas Permeability

● Ease of Device Priming

### Camouflage™ Benefits

- Adherence to all substrates
- Ultra-thin coating
- Water-based process (solvent-free)
- Non-pharmaceutical
- No UV or heat required
- Lean manufacturing process

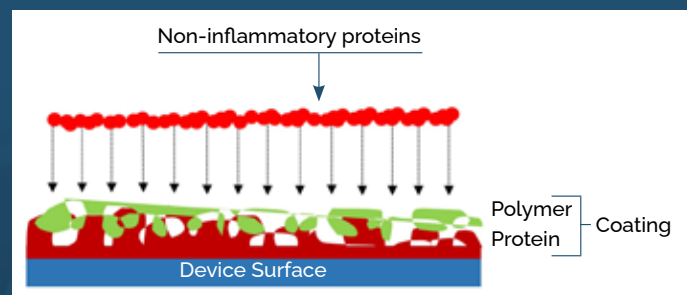
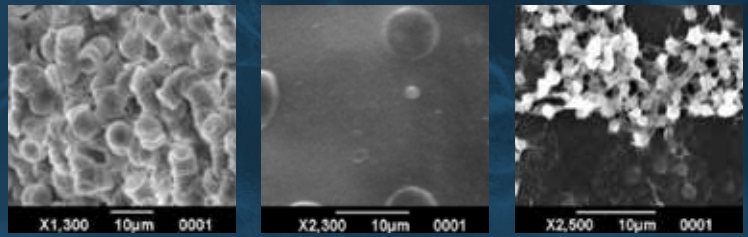


Fig 1

## Camouflage™ Performance

- Reduced fibrin network formation
- Reduced platelet activation
- Reduced leukocyte presence



Uncoated      Camouflage™ Coated      Competitor Coated

Fig 2

## Hemocompatibility

Camouflage™ coating passivates the surface while reducing platelet activation & inhibiting the coagulation cascade. Evidence of minimal progression towards thrombus formation (clot), with red blood cells remaining in suspension (Fig 3 & 4).

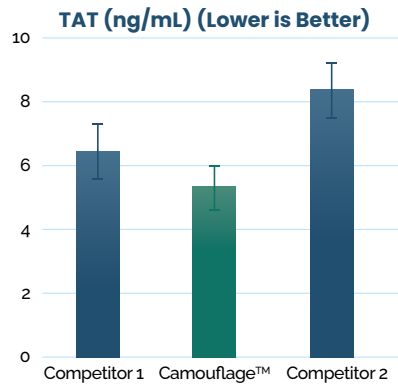


Fig 3

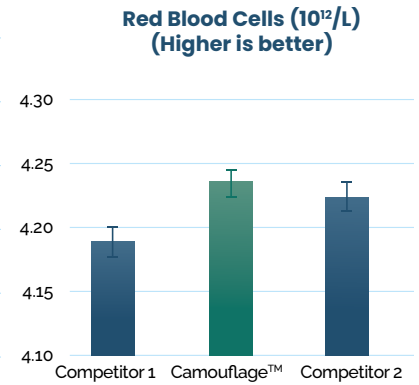


Fig 4

## Anti-Inflammatory

Camouflage™ coating minimizes the interaction with white blood cells (WBC) and reduces the inflammatory response. Data demonstrates WBC exhibiting minimal adhesion to the surface, with elastase activity remaining at low levels with suppressed inflammatory response (Fig 5 & 6).

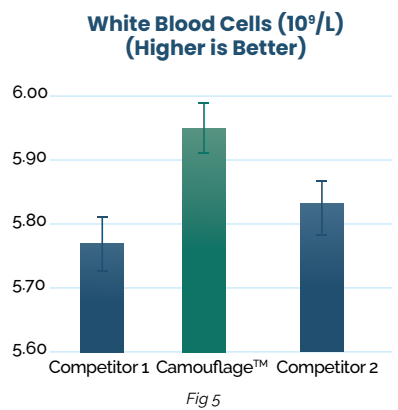


Fig 5

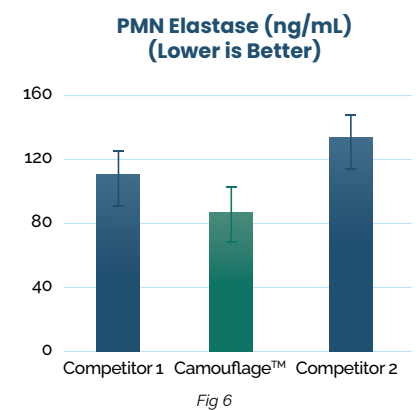


Fig 6

## Durability

Camouflage™ coating on ECMO tubing exhibited minimal degradation during a 30-day saline solution flow test of 6 liters per minute at 37°C (Fig 7).

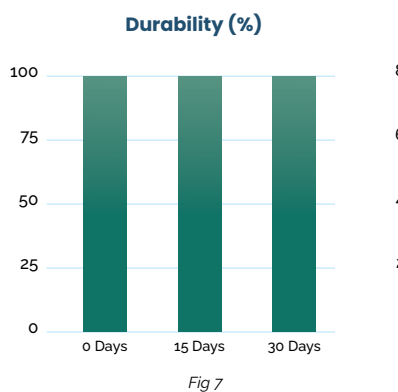


Fig 7

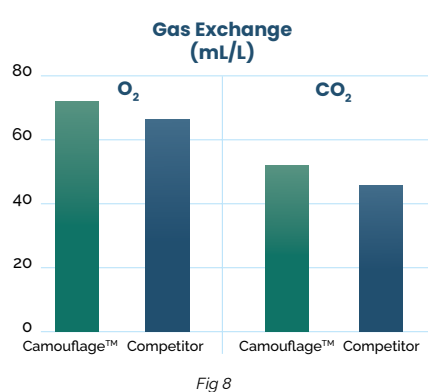


Fig 8

## Gas Permeability

Camouflage™ coating exhibits excellent gas exchange properties with minimal impact on oxygen and carbon dioxide flow rates (Fig 8).

# SmartReactors

## Services



### Prototype Coating

Enhance device performance with Camouflage™ coating technology.



### Design and Development

Expert design and process optimization services.



### Manufacturing Transfer

Seamlessly transition from development to full-scale production.



### After Sales Support

Ensure long-term success with comprehensive after-sales support.



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