I.W. Tremont

Technical and Specialty Papers

ISO 9001:2008 Registered

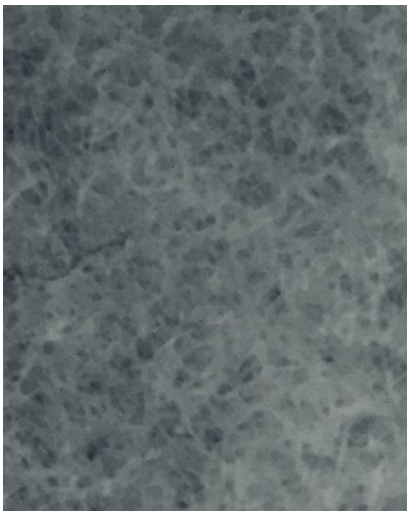
Diagnostic Materials

Fibrous Cellulose Acetate

Material class: High Purity Cellulose Acetate

Grade Nomenclature	Surface	Material Type	Thickness (mm)	Retention (µm)	Basis Weight (g/m^2)
CA-1	Fibrous Bright White	High purity CA fibers, no binder	1.45	100	155.0

Grade CA-1 is a non-woven material product platform which is highly modifiable in basis weight, density, porosity, surface treatments and other physical attributes.



20x magnification, backlit surface view

Ideally suited as a

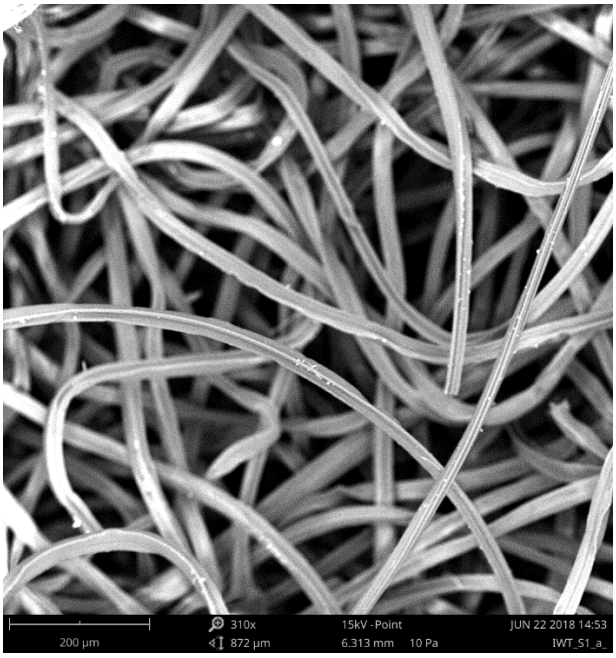
- Bio-sample collection media
- Wound care absorbent pad
- Transdermal drug delivery media
- Base material in a functionalized separation filter
- Stand alone, chemical resistant, high loading filter
- 3D cell scaffold in bioreactors or stirred cell devices
- Component in bio-sensors
- Lateral flow absorbent wick
- High capacity fluidic well for POCT requiring chase buffers
- Prefilter for higher retention CA surface membrane
- Respiration & O_2 therapy concentrator devices

This unique material demonstrates high surface area to mass ratio and high porosity. It is a fibrous format which differentiates this material from traditional cast films and surface membranes.

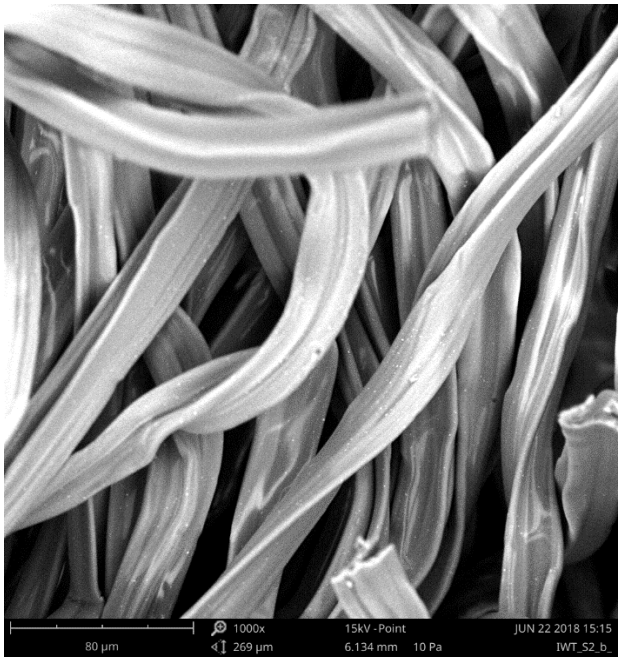
Consistent with other forms of Cellulose Acetate (CA) this media is ideal for Biomedical, Pharmaceutical and Life Sciences applications via high purity, good thermal stability, biocompatibility and functionalization.

The media is ideal as a diagnostic device component, wound care dressing, in DNA/RNA separation and amplification techniques and cell recovery.

In cast sheet membrane form, CA is typically low protein binding, making it ideal for high recovery demand applications. This media in fibrous form has an inherent charge making the media initially high protein binding, but upon loading releases easily and completely to yield very high recovery rates. This unique characteristic of the fibrous form of this material is partially due to the electrostatic properties remnant from the spinning technique as well as a proprietary method used to form the fiber as a structurally consistent matrix.



SEM image indicates highly uniform fiber structure



The complex fiber geometry increases surface area

This fibrous material in depth filter form demonstrates similar advantages of its CA surface membrane counterparts such as surface bonding, high purity and biocompatibility. Due to the torturous matrix within the depth of the media, combined with the complex fiber geometry there is a high surface area ratio that can be functionalized using chemical techniques for bonding. The media is also hydrophilic by filling of the void space within the matrix once wetting has begun. With a wetting factor roughly twice that of comparable polymeric fibrous media, this CA media will absorb and release at consistent rates.

The acetate ester of cellulose, which is a abundant natural material derived from the cellular structure of green plants is a widely accepted medical device biopolymer. This makes this media cost efficient and its high demand affords ample commercial supply. The material is compatible with gamma, e-beam and EtO methods of sterilization without degradation.

This grade demonstrates a unique ability to heat set into a caliper thickness without significant deviations in air/gas flow rates which allow device design variations using same base grade.

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