I.W. Tremont
Technical and Specialty Papers
ISO 9001:2015 Registered

Diagnostic Materials

Grade LF-D-23®
Grade CF-D-23®

Coated Whole Blood Separation Media

Now Available in 2 thicknesses to improve device optimization

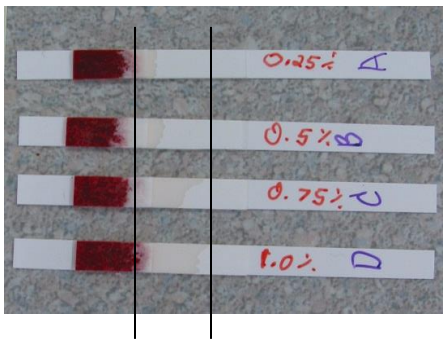
Material class: Whole blood separation - Coated agglutinating chemistry

Available as several variants, including:
Lateral flow (LF-D23) or Cross flow (CF-D23)

Grade D-23® is a high rate, high plasma yield blood separator for both lateral flow and vertical flow immunoassays. This media performs efficiently at a broad range of whole blood sample volumes, including <100µL which further expands your device design capabilities.

Material originates as our D-23® base glass borosilicate glass microfiber filter media containing a proprietary acrylic binder system. The base glass material, although an effective whole blood separator alone, is then treated with a novel coating technology which yields high quality plasma with surprising efficacy, speed and with little-to-no red cell hemolysis. Now available in 2 thicknesses for further optimization of your device design.

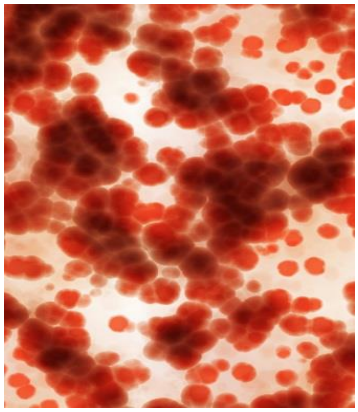
Plasma yield of >40%, at a rate of 30-120 seconds is achieved via the agglutinating chemistry and coating technology developed by a CRO in the United States whose specialty is blood separation and device development. This market proven media is currently included as a component in successfully commercialized and patented devices with 510K filings.



Resultant plasma yield zone

The agglutinating coating can be altered to best fit the application, separation rate and whole blood sample size for your device design.

Shown here are 4 titrations of the agglutinating chemistry (using no buffer) illustrating the plasma yield for similar Hct samples by volume and time in a simple lateral flow design.



Material demonstrates high uniformity in formation and density allowing reliable migration rates, in both cross and lateral flow applications. With little caliper deviation the media is ideal for challenging lamination applications and micro fluidic devices.

Uniform density and stability is ideal for automated device assembly. This media demonstrates excellent lot-to-lot reproducibility - CofC and CofA provided with shipments – Manufactured in an FDA approved facility and available as rolls, reels, sheets and semi-finished converted configurations in both pre and post coated versions.

This media is also available as a base glass microfiber which performs basic whole blood separation via precisely engineered porosity and fiber matrix. In the natural uncoated configuration both caliper versions intrinsically demonstrate plasma yield of approximately 15% by volume at nominal Hct range. It is suitable for both lateral and vertical flow configurations and is highly consistent in density and caliper for application of your own micro-coating and dip/dry saturation chemistry.

3 plasma separation modes in 2 material thicknesses are now available containing proprietary agglutinating chemistry coating. In this coated versions demonstrate plasma yield >40%.

- Coated for high yield agglutinating process, LATERAL FLOW
  Hct RANGE: NOMINAL = x1
  Hct RANGE: HIGH = x2

- Coated for high yield agglutinating process, CROSS FLOW (vertical)
  Hct Range: NOMINAL = x1

Basic material physical characteristics:

	D-23®	D23®-TC1
Basis Weight (g/m2):	94.4	70.0
Caliper Thickness (mm):	0.50	0.375
Micron retention (µm):	3-5	3.6
Tensile strength (lb):	8.0 MD, 4.0 CD	7.0 MD, 5.5 CD
Basic migration rate:	35 sec. / 4cm	28 sec. / 4cm

Known competitive grades*: GE Healthcare Whatman Fusion 5,
GE Healthcare Whatman GF/DVA, LF1, MF & VF2
Ahlstrom / Pall Cytosep®

Please request your device developer's sample kit for coated D-23® variants along with additional technical information.

*At time of publication no FDA 510k has been filed or approved on material alone, only as a component. Suitability without such approval in clinical use is not implied. Incorporation in approved device shall be responsibility of OEM *Use of competitive trademark or nomenclature for reference only. No ownership or license rights implied. As with all competitive material equivalencies, specific evaluation and testing should be thoroughly conducted. Performance of plasma yield is consistent with in-lab testing and dependent on device configuration and conditions.*

Ver 07-16