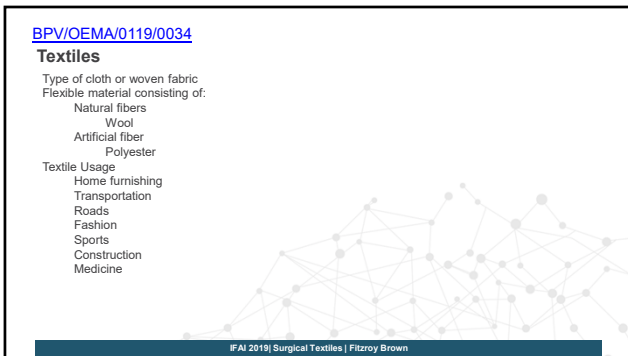
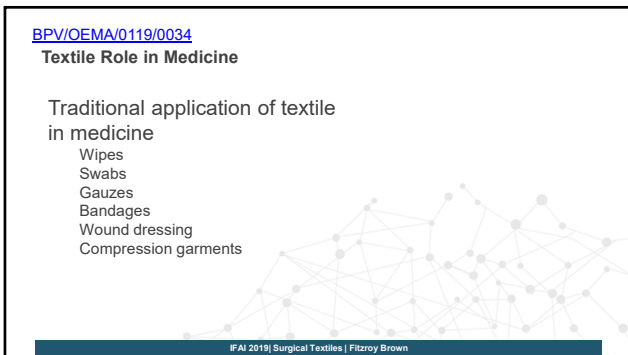


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[BPV/OEMA/0119/0034](#)

Implantable Fabrics

- Purpose of Implantable Textile
 - Medical device or applications with desired tissue in growth
- Potential Uses of Implantable Textile
 - AAA
 - Heart Valves
 - LVAD
 - Suture
 - Orthopedic
 - Hernia repair



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Implantable Fabrics

- History
 - World War II and Korean war
 - Solid wall tube of glass and metal
 - Flexible plastic tubes
 - Synthetic mesh
- Need for Implantable Textile
 - Desired tissue in growth



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Potential Uses for Surgical Applications

- Heart Valves:
 - Sew rings
 - Scaffolding
- Pledgets
 - From Catheter Cuffs to Heart Valve Sew Rings
 - Various thicknesses and porosities
- Cardiovascular patch
 - Potential repair of dissected vasculature





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Potential Uses for Surgical Applications

- AAA:
 - Repair of bulging abdominal aorta artery
- LVAD
 - Attached to drive line of Left Ventricular Assist Devices
- Orthopedic



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Structural Design

- Felts that may be used in areas of:
 - Cardiovascular
 - Pledgets for sutures
- Knitted
 - Cardiovascular
 - Promote tissue in growth
- Woven
 - Tight structures
 - Minimize blood loss
- Braided
 - Surgical ligation
 - Sutures




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Considerations for Implantable Textile Material Selection

Impact on tissue fluids
Chemically inert
Acceptance by tissue
Non-Carcinogenic
Withstand mechanical strain
Fabrication capability
Sterilization



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Testing Biomedical Textile

Thickness

ASTM D177
Normalization with a 10 oz Weight
1.129" diameter pressure foot



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Testing Biomedical Textile

- Ball Burst
 - ASTM D3797-07
- Purpose
 - Determine burst strength of fabric




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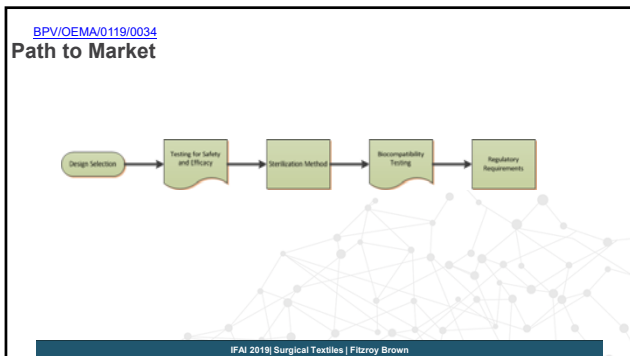
Testing Biomedical Textile

- Water Permeability
 - Purpose:
 - To measure amount fluid through the fabric
- Wales and Course
 - Purpose:
 - To verify the fabric structure is correct



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THANK YOU!

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PRODUCT AREA:
 Implantable Textiles, ePTFE

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