Cellentia™-H
Cellulose triacetate, single-use, hollow-fiber, high-flux hemodialyzer

www.nipro.com
Confidence from the inside out

NIPRO

30
More than 30 years of experience in the design and manufacture of dialyzers

R&D
1 in 5 hemodialysis patients worldwide is treated with a Nipro dialyzer
Innovative solutions, with patient safety and product performance in mind

Industry expertise
Trusted worldwide
Innovative solutions

Best known for its signature line of high-performance Elisio™-H dialyzers, Nipro also offers the Cellentia™-H single-use cellulose triacetate (CTA) dialyzer for hemodialysis patients with acute or chronic renal failure when standard therapy is judged to be inadequate.

Patient safety
Nipro offers the only dialyzers in the U.S. market that are made without BPA and DEHP in any of the product components. This ensures patients receive treatment with a dialyzer that is safe and gentle while limiting the exposure to these well-known endocrine disruptors.

In addition, the Nipro Cellentia dialyzer is designed with a CTA membrane, which offers a solution for treating patients who have difficulty tolerating standard hemodialysis filters made with polysulfone, polyethersulfone, or polyarylethersulfone.

Proven performance
Dialyzer membranes are important in the success of hemodialysis therapies and adequacy. Matching dialyzer performance to the patient needs is critical in meeting the prescribed clearance goals.

As part of Nipro's commitment to quality, all of its dialyzers are designed to meet high performance membrane (HPM) standards. The HPM classification system is used to identify hollow-fiber dialyzers that deliver an advanced level of performance.
Cellentia-H

Every detail of the Cellentia dialyzer is designed to inspire confidence, from its internal membrane construction to its external housing.

Smooth mirror-like surface
Mirror finish on both ends of the hollow fibers optimizes blood rinse-back.

CTA membrane
Cellulose triacetate is a thinner semi-synthetic membrane material, which allows for optimized clearances.

Moire fiber structure
Crimp fiber allows homogeneous flow of dialysate, which enhances transmembrane solute passage.

CTA membrane and housing are not made with BPA or DEHP, minimizing patient risk of endocrine disruption and related health issues.

Excellent biocompatibility
CTA membrane biocompatibility optimizes transmembrane solute passage and minimizes potential for adverse reaction in patients.

Dry gamma sterilization
Process optimized to reduce free radicals and enhance product safety.

Four dialyzer sizes
Available in 15H, 17H, 19H, and 21H sizes to enable treatments tailored to patient needs while providing cost efficiencies.
### Specifications and in-vitro data

<table>
<thead>
<tr>
<th>Product code</th>
<th>Cellentia-19H</th>
<th>Cellentia-17H</th>
<th>Cellentia-19H</th>
<th>Cellentia-21H</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>DD+CT-C-19H</td>
<td>DD+CT-C-17H</td>
<td>DD+CT-C-19H</td>
<td>DD+CT-C-21H</td>
</tr>
<tr>
<td>Surface area (m²)</td>
<td>1.5</td>
<td>1.7</td>
<td>1.9</td>
<td>2.1</td>
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</tbody>
</table>

#### CLEARANCE (mL/min)

<table>
<thead>
<tr>
<th>Clearances (mL/min)</th>
<th>Blood (mL/min)</th>
<th>Dialysate (mL/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>500</td>
<td>195 265 315</td>
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<tr>
<td></td>
<td>800</td>
<td>339 383</td>
</tr>
<tr>
<td>Creatinine</td>
<td>500</td>
<td>187 246 280</td>
</tr>
<tr>
<td></td>
<td>800</td>
<td>307 335</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>500</td>
<td>133 150 163</td>
</tr>
<tr>
<td></td>
<td>800</td>
<td>174 183</td>
</tr>
<tr>
<td>Phosphate</td>
<td>500</td>
<td>183 224 250</td>
</tr>
<tr>
<td></td>
<td>800</td>
<td>273 301</td>
</tr>
</tbody>
</table>

#### Ultrafiltration coefficient (mL/hr/mmHg)

- 41
- 45
- 48
- 52

#### Priming volume (mL)

- 87
- 98
- 110
- 122

#### PRESSURE DROP

<table>
<thead>
<tr>
<th>Blood (mL/min)</th>
<th>Dialysate (mL/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>500</td>
</tr>
<tr>
<td>200</td>
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<tr>
<td>200</td>
<td>500</td>
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<tr>
<td>200</td>
<td>500</td>
</tr>
</tbody>
</table>

#### Blood compartment (mmHg)

- 65
- 155
- 64
- 152
- 63
- 149
- 62
- 145

#### Dialysate compartment (mmHg)

- 14
- 22
- 15
- 24
- 14
- 22
- 14
- 22

#### Maximum blood flow rates (mL/min)

- 500
- 500
- 500
- 500
- 500
- 500
- 500
- 500

#### Maximum dialysate flow rates (mL/min)

- 800
- 800
- 800
- 800

#### Sieving coefficient (tested substances)

- Urea: 1.00
- Creatinine: 1.00
- Albumin: <0.01

### Technical information

- **Membrane polymer:** Cellulose tricetate
- **Inner diameter:** 200 microns
- **Membrane thickness:** 15 microns
- **Maximum TMP:** 500 mmHg
- **Header:** Polypropylene
- **Housing:** Polypropylene
- **Potting compound:** Polyurethane
- **Sterilization:** Gamma irradiation

### In-vitro test conditions

Testing was performed in compliance with the evaluation standard for dialyzer performance called for by ANSI/AAMI ISO 8067.

1. **Test solution temperature:** 37°C
2. **Ultrafiltration rate:** 10 mL/min
3. **Ultrafiltration rate test solution:** Bovine blood
   - Hematocrit: 32%
4. **Pressure drop:** 50 mmHg transmembrane pressure
5. **Maximum blood flow:** 500 mL/min
6. **Minimum blood flow:** 200 mL/min

### Sources
