



Cellentia™-H

Cellulose triacetate, single-use,
hollow-fiber, high-flux hemodialyzer



Confidence

from the inside out



30

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



1 in 5 hemodialysis patients worldwide is treated with a Nipro dialyzer¹

R&D

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.²

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.³

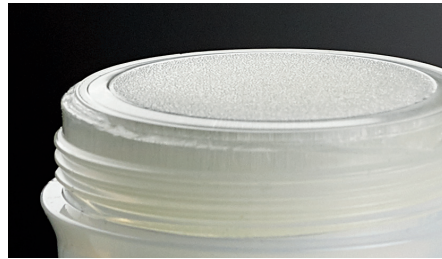
Proven performance

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.⁴

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.⁵

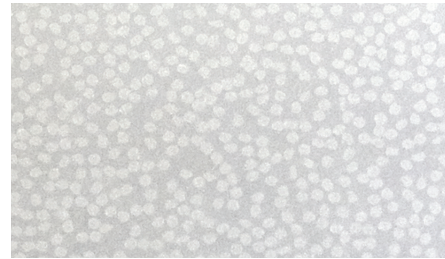
Cellentia-H

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.⁶



CTA membrane

Cellulose triacetate is a thinner semisynthetic membrane material, which allows for optimized clearances.



Moire fiber structure

Crimp fiber allows homogeneous flow of dialysate, which enhances transmembrane solute passage.⁶



CTA membrane and housing are not made with BPA or DEHP, minimizing patient risk of endocrine disruption and related health issues.²



Excellent biocompatibility

CTA membrane biocompatibility optimizes transmembrane solute passage and minimizes potential for adverse reaction in patients.⁷

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

		Cellentia-15H	Cellentia-17H	Cellentia-19H	Cellentia-21H
Product code		DD+CT15H	DD+CT17H	DD+CT19H	DD+CT21H
Surface area (m²)		1.5	1.7	1.9	2.1
CLEARANCE (mL/min)					
	Blood (mL/min)	200 300 400 500	200 300 400 500	200 300 400 500	200 300 400 500
	Dialysate(mL/min)				
Urea	500	195 265 315	198 273 326	198 277 337	199 281 344
	800	338 383	353 402	364 417	372 430
Creatinine	500	187 246 280	191 258 294	193 266 306	195 273 315
	800	307 335	323 358	336 374	345 390
Vitamin B12	500	133 150 163	142 162 177	149 175 190	154 184 203
	800	174 183	190 201	205 218	218 234
Phosphate	500	183 224 252	186 234 264	189 242 277	192 250 285
	800	273 301	289 319	303 335	316 350
KOA Urea (mL/min)		1045	1214	1321	1450
Ultrafiltration coefficient (mL/hr/mmHg)		41	45	48	52
Priming volume (mL)		87	98	110	122
PRESSURE DROP					
	Blood (mL/min)	200 500	200 500	200 500	200 500
	Dialysate(mL/min)	500 800	500 800	500 800	500 800
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
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 triacetate

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 8637.

- Test solution temperature:** 37° C
Ultrafiltration rate: 10 mL/min
- Ultrafiltration rate test solution:** Bovine blood
Hematocrit: 32%
- Priming volume (blood compartment) test solution:** Water
- Pressuredrop:** 50 mmHg transmembrane pressure
- Maximum blood flow:** 500 mL/min
Maximum dialysate flow: 800 mL/min
- Minimum blood flow:** 200 mL/min
Minimum dialysate flow: 500 mL/min
- KOA:** Qb/Qd/Qf = 300/500/10 mL/min

Sources

- Data on file.
- Manikkam M, Tracey R, Guerrero-Bosagna C, Skinner MK. Plastics Derived Endocrine Disruptors (BPA, DEHP and DBP) Induce Epigenetic Transgenerational Inheritance of Obesity, Reproductive Disease and Sperm Epimutations. PLOS ONE, 2013;8(1):e55387.
- Sánchez-Villanueva R, González E, Quirce S, et al. Hypersensitivity reactions to synthetic haemodialysis membranes. Nefrología, 2014;34(4):520-525.
- Azar, AT. Modelling and Control of Dialysis Systems: Dialyzer Performance Parameters. Springer Berlin Heidelberg, 2013;1:379-425.
- National Kidney Foundation. A Clinical Update on Dialyzer Membranes: State-of-the-Art Considerations for Optimal Care in Hemodialysis. Clinical Bulletin, 2014.
- Sunohara T, Masuda T. Cellulose triacetate as a high-performance membrane. Contrib Nephrol, 2011;173:156-63.
- Liu S, Shi W, Liang X, et al. Cellulose Triacetate Dialyzer Reduces Platelet Loss during Continuous Veno-Venous Hemofiltration. Blood Puri, 2010;29:375-382.



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