

Nephral ST

Premium choice for your patients

The reference in biocompatibility & adsorption capacity

The symmetrical homogeneous structure of Nephral ST hydrogel membrane enhances its diffusion, convection and especially adsorption characteristics.

This outstanding adsorption capacity contributes to efficient removal of toxins such as β 2 Microglobulin or AGE's and elimination of inflammatory mediators such as cytokines or anaphylatoxins.

In addition, a specific surface treatment on the membrane with the polyethyleneimine biopolymer has been developed to prevent blood contact activation.

Systemic heparin reduction

The surface treatment of the membrane does not only prevent blood contact activation but also binds heparin molecules during priming with a pre-heparinized saline solution.

Therefore, less systemic heparin may be given to the patient to complete the dialysis session, thus reducing risks and constraints associated with systemic anticoagulation.

AFB & AFB.K therapies

Associated with Hospal Acetate Free Biofiltration therapies, Nephral ST dialyzer contributes to cardiovascular stability in patients at risk.



Materials

- AN69ST membraneAcrylonitrile and sodium methallyl sulfonate copolymer
- Surface treatment agentPolyethyleneimine
- HousingPolycarbonate
- Potting.....Polyurethane
- Sterilization agent.....Gamma ray sterilization (wet)

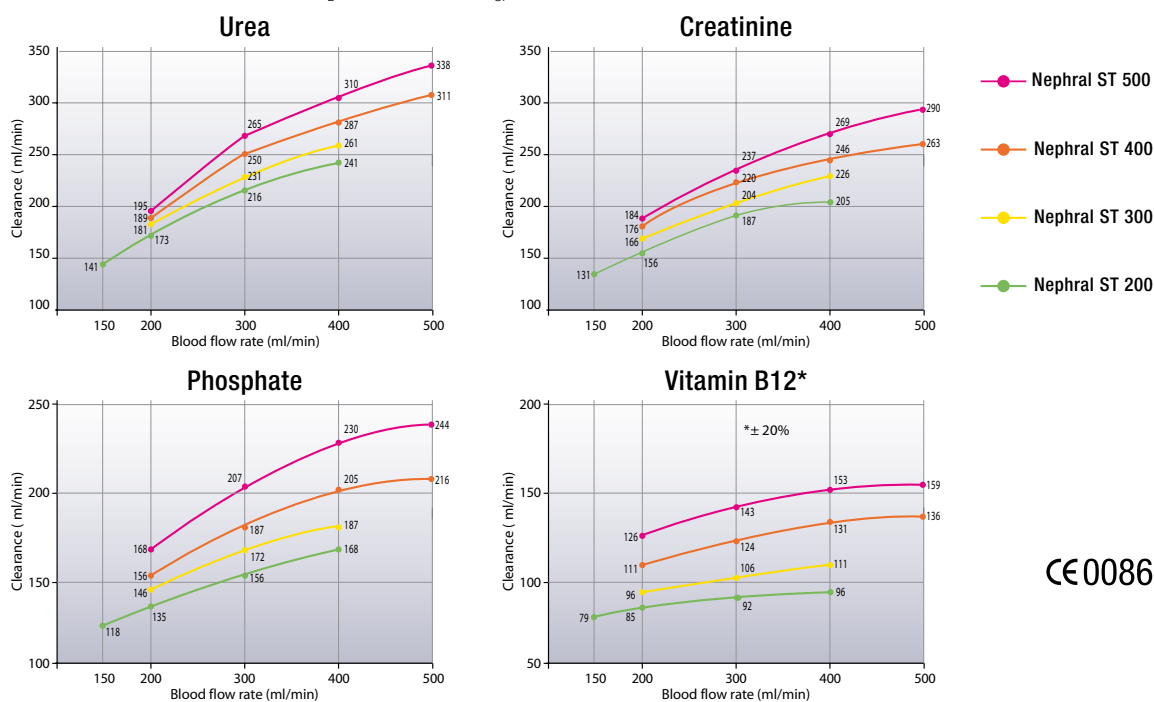
Specifications	Model	Nephral ST 200	Nephral ST 300	Nephral ST 400	Nephral ST 500
• Fiber					
Effective length (mm)		220	220	280	280
Internal diameter (wet - μm)		210	210	210	210
Wall thickness (wet - μm)		42	42	42	42
• Surface area (wet - m^2)		1.05	1.30	1.65	2.15
• Pressure drop (mmHg)	blood side*	87	76	84	67
$Q_B = 300 \text{ ml/min}$; $Q_D = 500 \text{ ml/min}$	dialysate side	18	17	18	15
TMP = 100 mmHg - 37°C					
*Typical in vitro data : Bovine blood, Hct = 32 %, Pt = 60 g/l					
• Priming volume ($\pm 10\%$) (ml)	blood side	67	83	101	128
TMP = 100 mmHg	dialysate side	107	111	133	141
• Ultrafiltration coefficient ($\pm 20\%$) - ml/(h x mmHg)		33	40	50	65
bovine blood ; Hct = 32 % ; Pt = 60 g/l					
• Sieving coefficient (SC) with plasma	Creatinine	1	1	1	1
(Pt = 60 g/l - $Q_B = 300 \text{ ml/min}$	Vitamin B12	1	1	1	1
$Q_{UF} = 60 \text{ ml/min}$ - 37°C)	Inulin	0.80	0.96	0.96	0.96
Myoglobin		0.55	0.60	0.65	0.68
Albumin		< 0.01	< 0.01	< 0.01	< 0.01
• Quantity per box		24	24	24	24
• Weight (g)		162	200	239	253
• Calorific potential (KJ)		3547	4539	4970	5674

Recommendations

• Maximum TMP (mmHg)	450	450	450	450
• Maximum blood pressure (mmHg)	300	300	300	300
• Minimum blood flow rate (ml/min)	150	200	200	200
• Recommended ultrafiltration flow rate during priming (l/h)	2	2	2	2
• Rinseback (volume of saline solution) (ml)	300	300	400	500

In vitro clearances (ml/min)

Dialysate - 37°C - n=10 ($\pm 10\%$), $Q_D = 500 \text{ ml/min}$, $Q_{UF} = 0 \text{ ml/min}$



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