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PRODUCT SPECIFICATION SHEET

Product Name: Toyopearl® Q-600C AR (strong anion exchange resin with high capacity)

Part Numbers:

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| 21985 | Toyopearl Q-600C AR, 100 µm, 100 mL |
| 21986 | Toyopearl Q-600C AR, 100 µm, 250 mL |
| 21987 | Toyopearl Q-600C AR, 100 µm, 1 L |
| 21988 | Toyopearl Q-600C AR, 100 µm, 5 L |
| 21992 | ToyoScreen Q-600C AR, 1 mL x 6 ea. |
| 21993 | ToyoScreen Q-600C AR, 5 mL x 6 ea. |
| 21400 | ToyoScreen Column Holder |
| 42194 | ToyoScreen Column Holder with fittings |

Product Description: Toyopearl chromatographic resins are comprised of a methacrylic polymer incorporating high mechanical and chemical stability. Resins are available as non-functionalized “HW” series resins for size exclusion separations and derivatized with surface chemistries for alternative modes of chromatography such as ion exchange, hydrophobic interaction or affinity separations.

Toyopearl Q-600C AR chromatographic resins are designed for anion exchange chromatography. This chromatographic mode separates molecules on the basis of ionic interactions between the sample and the resin. The separation is usually accomplished in buffered aqueous solution with a gradient of increasing ionic strength. Alternatively, pH adjustment may be used for control of elution. Toyopearl Q-600C AR resins were designed to withstand higher concentrations of NaOH used in normal cleaning operations.

Formulation: Particulate resin (spherical), available in particle sizes (mean diameter):
 100 µm = “C” grade
 Supplied as slurry in 20 % ethanol (v/v).

Physicochemical Specifications:

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| ▪ Appearance | White resin slurry which settles upon standing |
| ▪ Particle Size Distribution (>80 % within range) | 50 – 150 µm for C-grade |
| ▪ Exclusion Limit | 2.5 x10 ⁵ Dalton (globular protein) |
| ▪ Mean Pore Diameter | 750 Å |
| ▪ Pressure drop across the column | max. 3 bar (recommended) |
| ▪ Operating Linear Flowrate | normally 10 – 600 cm/hour (depending on particle size) |
| ▪ Ion Exchange Capacity | 0.15 - 0.20 meq/mL |
| ▪ Protein Adsorption Capacity | > 120 g/l (Bovine Serum Albumin) |
| ▪ Bacterial Count | ≤ 100 CFU/mL |
| ▪ Endotoxin Concentration | ≤ 10.0 endotoxin units/mL |
| ▪ Pack sizes and type | 100 mL, 250 mL, 1 L, 5 L, 50 L Packed in virgin Polyethylene container with Polypropylene cap. |

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| ▪ Resin Volume per Container | The indicated volume is the settled resin volume. |
| ▪ Shipping Solvent | 72 % (v/v) slurry in 20 % (v/v) ethanol |
| ▪ Long Term Storage Conditions | 20 % (v/v) ethanol |
| ▪ Cleaning in Place / Sanitization | 0.1 mol/L HCl or 0.1 mol/L NaOH (can tolerate exposure up to 1.0 mol/L NaOH for several months) |
| ▪ Foreign Substance | not observed, no visual evidence |
| ▪ Eluable Matter | < 0.2 % |
| ▪ Shelf Life Stability | Minimum 10 years |

For detailed test procedures please refer to Regulatory Support File BB-MF-3907.