

TRILITE® UPRA220U

Uniform Particle Size Strong Base Anion Exchange Resin for Ultrapure water

Rev 3. Jan 2023

TRILITE® UPRA220U is a UPS, SBA, gel-type, type1 exchange resin for ultrapure water designed with excellent ion removal capacity, allowing for the economical production of high-purity water. TRILITE® UPRA220U is a product that reduces TOC with high exchange capacity and chemical/physical stability, allowing for long-term use.

Physical and Chemical Properties

| | | | |
|-----------------------|---|------------------------------------|-------------------------------|
| Matrix | Polystyrene+DVB, Gel | Functional Group | Type 1 (Trimethylammonium) |
| Ionic Form | OH ⁻ | Total Capacity(eq/ℓ) | 1.10 ↑ |
| Shipping Density(g/ℓ) | 665 | Moisture Retention(%) | 59~65 |
| Particle Density | 1.08 | Uniformity Coefficient | 1.1 ↓ |
| Particle Size(μm) | 590±50 | Whole Beads(%) | 95 ↑ |
| Ionic Conversion (%) | OH ⁻ (95.0 ↑), Cl ⁻ (1.0 ↓) | Compression strength (kgf/bead) | 0.4 ↑ |

Recommended Operating Conditions

| | | | |
|--------------------|-----|------------------------|-------|
| Operating Temp(°C) | 60 | pH Range | 0-14 |
| Bed Depth(mm) | 800 | Service Flow Rate(m/h) | 5~120 |

Applications

TRILITE® UPRA220U is widely used for demineralization for ultrapure water applications (i.e semiconductor, display, pharmaceuticals, nuclear & thermal power plant)

Hydraulic Characteristics

Figure 1 shows the backwash expansion of TRILITE® UPRA200U as a function of flow rate and temperature.

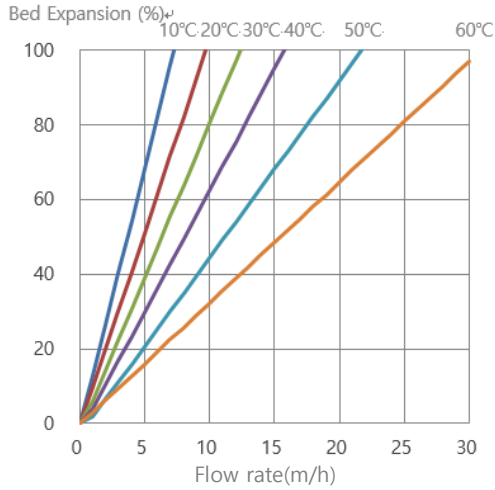


Figure 1. TRILITE® UPRA220U Backwash Expansion

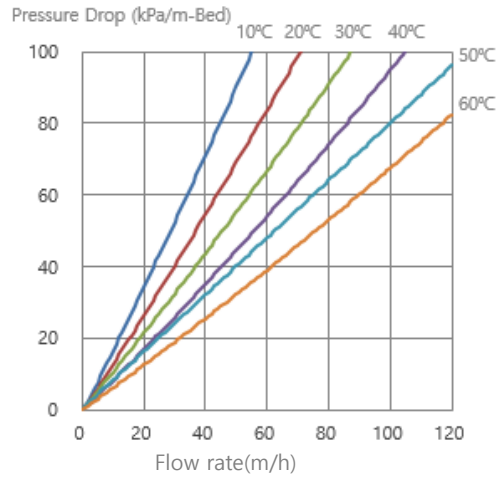


Figure 2. TRILITE® UPRA220U Pressure Drop

Resistivity & TOC

- Resistivity > 15.0 MΩ·cm (in 30min)
- ΔTOC < 20ppb (in 120min)
- Operating condition (Inlet): Resistivity > 17.5 MΩ·cm, TOC < 2ppb, SV = 30

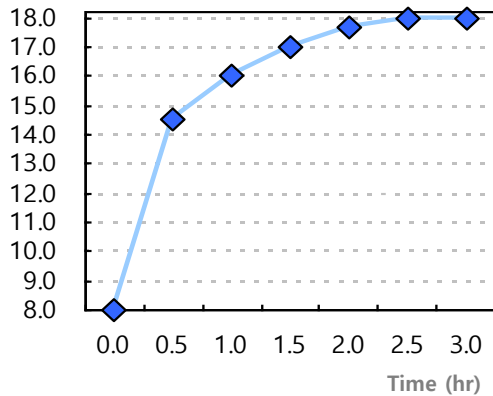


Figure 3. TRILITE® UPRA220U Resistivity

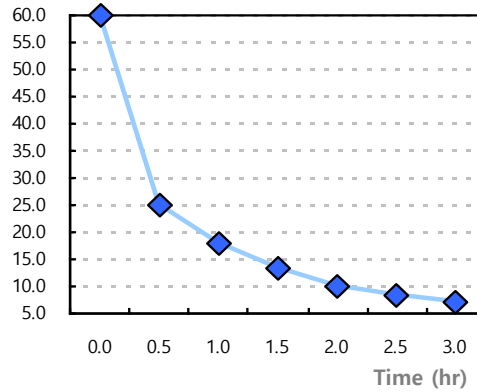


Figure 4. TRILITE® UPRA220U ΔTOC

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Samyang's TRILITE Ion exchange resins are produced based on the ISO 9001, ISO 14001 certification.
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