

## SPECIFICATION

CultureSureR L-Glutamic Acid, Animal-derived-free  
for Cell Culture

| REQUIREMENT  | SPECIFICATION                        |
|--|--------------------------------------|
| Description  | White crystals or crystalline powder |
| Identification   | to pass test                         |
| Optical rotation [ $\alpha$ ]D20 (calculated on the dried basis) | +31.5~+32.5°                         |
| pH   | 2.9~3.9                              |
| Purity   | -                                    |
| (1) Clarity and color of solution                                | to pass test                         |
| (2) Chloride   | max.0.021%                           |
| (3) Sulfates   | max.0.028%                           |
| (4) Ammonium   | max.0.02%                            |
| (5) Heavy metals   | max.10ppm                            |
| (6) Iron   | max.10ppm                            |
| (7) Related substances   | to pass test                         |
| Loss on drying   | max.0.3%                             |
| Residue on ignition  | max.0.1%                             |
| Assay (calculated on the dried basis)                            | 99.0~101.0%                          |
| Bacterial endotoxins   | less than 25.0EU/g                   |
| Mycoplasma test  | to pass test                         |
| Viable count test  | max.50CFU/g                          |