

Code No.05-0695

## SPECIFICATION

## Ethanol (99)

Wako Special Grade

| REQUIREMENT  | SPECIFICATION          |
|--|------------------------|
| Appearance   | Colorless clear liquid |
| Assay (C <sub>2</sub> H <sub>5</sub> OH) (GC)                                  | min.99.5%(mass/mass)   |
| Density (20°C)   | 0.789~0.791g/ml        |
| Water  | max.0.2%(mass/mass)    |
| Residue after evaporation  | max.5ppm(mass/mass)    |
| Acidity (as CH <sub>3</sub> COOH)  | max.0.002%(mass/mass)  |
| Alkalinity (as NH <sub>3</sub> )   | max.1ppm(mass/mass)    |
| Aldehydes and ketones (as CH <sub>3</sub> COCH <sub>3</sub> )                  | max.0.001%(mass/mass)  |
| Methanol (CH <sub>3</sub> OH)  | max.0.02%(mass/mass)   |
| 2-Propanol [(CH <sub>3</sub> ) <sub>2</sub> CHOH]                              | max.0.01%(mass/mass)   |
| 1-Propanol (CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> OH)                | max.0.005%(mass/mass)  |
| 1-Butanol [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> OH] | max.0.005%(mass/mass)  |
| Substances reducing permanganate   | to pass test           |
| Substances darkened by sulfuric acid   | to pass test           |

Production method:by fermentation