

## 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