



NEWAY SINOPHC TECH. LIMITED

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Certificate of Analysis

(Gamma-Valerolactone 伽马 - 缬罗内酯)

Issue Date: 20 FEB 2026 Quality Release Date: 20 FEB 2026

Product Name

Gamma-Valerolactone (伽马 - 缬罗内酯)

Product Information

Product Number GDL-20260220

Batch Number GDL-SH2026022001

Brand SIGALD

CAS Number 108-29-2

MDL Number MFCD00005438

Formula C₅ H₈ O₂

Formula Weight 100.12 g/mol

Form Colorless clear liquid, mild coconut-cream aromatic odor

Test Results

Test	Specification (Flavor & Fragrance/Industrial Standard)	Result	Unit	Test Method
Appearance (Color/Form)	Colorless clear liquid, no visible impurity	Colorless clear liquid	-	Visual Inspection (25°C)
Assay (Gamma- Valerolactone)	≥ 99.0%	99.7%	%	Gas Chromatography (GC)
Refractive Index (n ₂₀ D)	1.430 ~ 1.434	1.432	-	Abbe Refractometer
Relative Density (25/25°C)	1.040 ~ 1.044	1.042	g/cm ³	Hydrometer Method
Boiling Point	205 ~ 207°C	206.3°C	°C	Distillation Method
Flash Point (Closed Cup)	≥ 45°C	46°C	°C	Pensky-Martens Closed Cup Tester
Acid Value (as KOH)	≤ 0.5	0.2	mg KOH/g	Titration Method
Water Content	≤ 0.1%	0.03%	%	Karl Fischer Titration
Residue on Ignition	≤ 0.05%	0.01%	%	550°C Muffle Furnace Ignition
Heavy Metals (Pb)	≤ 5 ppm	0.2 ppm	ppm	Atomic Absorption Spectrometry (AAS)
Heavy Metals (As)	≤ 1 ppm	0.06 ppm	ppm	Atomic Fluorescence Spectrometry (AFS)
Ethanol Solubility (1:10, 95% EtOH)	Clear homogeneous solution	Conforms	-	Solubility Test
Total Bacterial Count (Flavor Grade)	≤ 100 CFU/mL	15 CFU/mL	CFU/mL	Plate Count Method
E. coli (Flavor Grade)	Negative	Negative	-	Microbiological Detection

Certification

This batch of product has been tested in accordance with international flavor & fragrance and industrial grade standards for Gamma-Valerolactone and meets all specified requirements. It is qualified for use in flavor & fragrance, food, organic synthesis, green solvent and other related fields.