

## Certificate of Analysis (COA)

### - Clove Bud Oil

**Issue Date:** 22 February 2026 **Product Name:** Clove Bud Oil **CAS Number:** 8000-34-8 **Product Number:** CBO-20260222 **Batch Number:** CBO-SH2026022201 **Brand:** SIGALD **Formula:** Natural essential oil mixture (main component: Eugenol  $\geq 85\%$ ) **Molecular Weight:** Variable (natural mixture) **Quality Release Date:** 22 February 2026

Test	Specification (Industry Standard)	Result	Unit	Test Method
Appearance (Color)	Colorless to pale yellow	Pale yellow	-	Visual Inspection (25°C)
Appearance (Form)	Clear mobile liquid	Clear mobile liquid	-	Visual Inspection (25°C)
Odor	Characteristic strong clove aromatic scent	Characteristic clove aroma	-	Sensory Test
Eugenol Content	$\geq 85.0\%$	88.5%	%	Gas Chromatography (GC)
Refractive Index (20°C)	1.5280-1.5380	1.5325	-	Abbe Refractometer
Relative Density (20/20°C)	1.038-1.060	1.045	g/cm <sup>3</sup>	Hydrometer Method
Optical Rotation (20°C)	-2° to +1°	-0.5°	°	Polarimeter
Solubility in 70% Ethanol	1:2 soluble, clear	1:2 clear solution	-	Volumetric Method
Water Content	$\leq 0.5\%$	0.21%	%	Karl Fischer Titration
Heavy Metals (Pb)	$\leq 5$ ppm	< 1 ppm	ppm	Atomic Absorption Spectrometry (AAS)
Heavy Metals (As)	$\leq 1$ ppm	< 0.1 ppm	ppm	Atomic Fluorescence Spectrometry (AFS)
Total Bacterial Count	$\leq 100$ CFU/mL	18 CFU/mL	CFU/mL	Plate Count Method
E. coli	Negative	Negative	-	Microbiological Detection
Supplier Information	Confirmed	Confirmed	-	-
Registered Trademark	Confirmed	Confirmed	-	-

### Certification

This batch of Clove Bud Oil has been tested in accordance with the relevant industrial standards for natural essential oils and all test results meet the specified requirements. The product is qualified for use.