BIORUŽA, s. r. o.

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CERTIFICATE of ANALYSIS (COA)

COMMON NAME	Verbena, Lemon
LATIN NAME	*Lippia citriodora*
COUNTRY OF ORIGIN	Morocco
CULTIVATION METHOD	Conventional
TYPE	Essential Oil
EXTRACTION METHOD	Steam Distilled
PLANT PART	Leaves
USE	Aromatherapy, Natural Perfumery, Cosmetics

LOT #	6/2025
MANUFACTURING DATE	October 2025
BEST BY DATE	October 2028

	SPECIFICATIONS (Range)	
SPECIFIC GRAVITY @20˚C	0.885 – 0.895	0.8852
REFRACTIVE INDEX @20˚C	1.475 – 1.495	1.4806
OPTICAL ROTATION @20˚C	-25˚ to -5˚	-26.00˚

PHYSICAL APPEARANCE	Transparent Liquid	*Conforms*
COLOR	Light yellow to orange	*Conforms*
ODOR	Fresh, lemony	*Conforms*
SOLUBILITY	Soluble in alcohol and fixed oils	
SPECIAL USE INSTRUCTIONS	Dilute before use	

PRIMARY CONSTITUENTS	Limonene, Citral (Geranial+Neral)

COMPONENTS	**% RANGE**	**%**		**Components**	**% RANGE**	**%**
LIMONENE*	*na*	22.09		SABINENE-CIS-HYDRATE	*na*	0.43
GERANIAL*	*na*	12.48		TERPINOLENE	*na*	0.07
NERAL*	*na*	9.92		ROSEFURAN	*na*	0.11
EUCALIPTOL	*na*	6.57		LINALOOL*	*na*	0.36
BETA-CARYOPHYLLENE	*na*	5.02		TRANS-SABINENE-HYDRATE	*na*	0.05
AR-CURCUMENE	*na*	4.25		N-NONANAL	*na*	0.03
GERMACRENE-D	*na*	2.61		PHOTO-CITRAL-B	*na*	0.31
ACIPHYLLENE	*na*	1.83		LIMONENE-CIS-OXYDE	*na*	0.06
CARYOPHYLLENE-OXYDE	*na*	2.56		(Z)-ISOCITRAL	*na*	0.49
BETA-CURCUMENE	*na*	1.06		ROSEFURANE EPOXYDE	*na*	0.19
ALPHA-TERPINEOL	*na*	1.22		DELTA-TERPINEOL	*na*	0.10
PHOTO-CITRAL-A	*na*	1.11		(E)-ISO-CITRAL	*na*	0.73
(E)-BETA-OCIMENE	*na*	3.13		TERPINEN-4-OL	*na*	0.20
6-METHYL-5-HEPTENE-2-ONE	*na*	2.22		NEROL	*na*	0.36
SABINENE	*na*	2.92		CARVONE	*na*	0.42
ALPHA-PINENE	*na*	1.34		PIPERITONE	*na*	0.20
METHYL-2-METHYL-BUTANOATE	*na*	0.27		BICYCLOELEMENE	*na*	0.24

ALPHA-THUJENE	*na*	0.14		GERANYL-ACETATE	*na*	0.80
CAMPHENE	*na*	0.02		ALPHA-COPAENE	*na*	0.77
BETA-PINENE	*na*	0.16		BETA-BOURBONENE	*na*	0.72
1-OCTEN-3-OL	*na*	0.06		BETA-ELEMENE	*na*	0.20
MYRCENE[65]	*na*	0.48		SESQUITHUJENE	*na*	0.11
DEHYDRO-1,8-CINEOLE	*na*	0.06		METHYL-EUGENOL[65]	*na*	0.05
ALPHA-PHELLANDRENE	*na*	0.01		ALPHA-GURGUNENE	*na*	0.10
ALPHA-TERPINENE	*na*	0.07		ALPHA-CEDRENE	*na*	0.40
PARA-CYMENE	*na*	0.08		BETA-COPAENE	*na*	0.16
BETA-PHELLANDRENE	*na*	0.03		(E)-BETA-FARNESENE	*na*	0.15
(Z)-BETA-OCIMENE	*na*	0.27		ALPHA-HIMACHALENE	*na*	0.03
BERGAMAL	*na*	0.03		ALPHA-HUMULENE	*na*	0.40
GAMMA-TERPINENE	*na*	0.13		ALLO-AROMADENDRENE	*na*	0.90
ALPHA-PATCHOULENE	*na*	0.15		BETA-ACORADIENE	*na*	0.03
GAMMA-MUUROLENE	*na*	0.27		ALPHA-ZINGIBERENE	*na*	0.78
GAMMA-CADINENE	*na*	0.23		DELTA-CADINENE	*na*	0.52
ALPHA-CADINENE	*na*	0.08		SPATHULENOL	*na*	1.04
(E)-NEROLIDOL	*na*	0.56		EPI-ALPHA-CADINOL	*na*	0.33
POGOSTOL	*na*	0.05				
** EU Allergen [65]=Prop 65*						

COMMENTS	Odor quality is excellent.