BIORUŽA, s. r. .

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CERTIFICATE of ANALYSIS (COA)

COMMON NAME	Black Cumin
LATIN NAME	*Nigella sativa*
COUNTRY OF ORIGIN	India
CULTIVATION METHOD	Certified Organic (USDA, NOP)
TYPE	Essential Oils
EXTRACTION METHOD	Steam distillation
PLANT PART	Seeds
USE	Body/Skin Care

LOT #	278
MANUFACTURING DATE	May 2023
BEST BY DATE	May 2028

	SPECIFICATIONS (Range)	
SPECIFIC GRAVITY @20˚C	0.915 – 0.925	0.9218
REFRACTIVE INDEX @20˚C	1.472 – 1.478	1.4726
OPTICAL ROTATION @20˚C	*na*	*na*

PHYSICAL APPEARANCE	Transparent liquid	*Conforms*
COLOR	Yellow to amber/brown	*Conforms*
ODOR	Spicy, warm.	*Conforms*
SOLUBILITY	Soluble in fixed oils, insoluble in alcohol.	
SPECIAL USE INSTRUCTIONS	Refrigerate to preserve freshness	

PRIMARY CONSTITUENTS	Linoleic Acid, Oleic Acid.
PRIMARY VOLATILE CONSTITUENTS	Thymoquinone, Cymene, Alpha-Thujene.

COMPONENTS	**Range %**	**%**		**COMPONENTS**	**Range %**	**%**
LINOLEIC ACID	45-65	58.6		CONTENT OF ESSENTIAL OIL	>5.0	6.0
OLEIC ACID	*na*	21.5		**VOLATILE COMPONENTS:**		
PALMITIC ACID	*na*	12.4		ALPHA THUJENE	*na*	6.4
PALMITOLEIC ACID	*na*	0.16		ALPHA PINENE	*na*	1.4
STEARIC ACID	*na*	2.7		SABINENE	*na*	0.77
VACCENIC ACID	*na*	1.5		BETA PINENE	*na*	1.6
ALPHA LINOLENIC ACID	*na*	0.23		CYMENE	*na*	27.4
ARACHIDIC ACID	*na*	0.18		LIMONENE*	*na*	1.3
EICOSENOIC ACID	*na*	0.31		GAMMA TERPINENE	*na*	0.15
EICOSADIENOIC ACID	>1.0	2.5		CARVONE	*na*	0.11
				THYMOQUINONE	*na*	43.7
				CARVACROL	*na*	1.2
				LONGIFOLENE	*na*	3.1
				THYMOHYDROQUINONE	*na*	0.56

COMMENTS	Odor quality is excellent.