

**CERTIFICATE OF ANALYSIS
COA**

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Product Name:	CO ₂ Total Extract
Product Use:	Raw materials for industry
Scientific Name:	<i>Echinacea purpurea</i>
Country of origin:	Albania
Company Name:	Esencial [®]
INCI Name:	<i>Echinacea purpurea</i> CO ₂ Total Extract

Lot #	TOT 201014-1
Batch #	200408-C
Manufacturing Date-	08.04.2020
Best Before Date-	08.04.2029

Part Used:	Aerial part
Quantity of main plant compounds	1. Chicoric acid- 23% 2. Caftaric acid- 25%
Extraction Method:	SCFE CO ₂
Quality:	100% Pure and Natural

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PROPERTIES	SPECIFICATIONS	RESULTS	METHOD
Appearance:	Dark brown	CONFORMS	Visual
Physical state	Solid	CONFORMS	Organoleptic
Odor:	Natural and fresh fragrance	CONFORMS	Organoleptic
Relative Density (g/ml):	-	1.150 at 20°C	ISO 279:1998 (E)
Solubility:	Soluble in lipophilic fluids such as essential oils and vegetable oils.	CONFORMS	
Avid Value:	-	64.28	ISO 124:1999 (E)
Flash Point:	-	> 120 °C	
Boiling point:	-	96 °C	ISO/TR 11018 (E)
Melting point :	-	55 °C	
Loss of drying:	≤5.0%	0.47 %	ISO 212:2007(E)
Residual Solvents:	no	CONFORMS	GC-FID
Total ashes:	-	1.0%	WHO
Shelf life:		9 years	
Storage:	Keep in a tightly closed container in a cool and dry place, protected from sunlight.		

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COMPONENTS Range %

Identification	Conforms to reference standard	CONFORMS	GC-FID
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	<u>Compound</u>	<u>%</u>
1	Verbenone	6.27
2	Spathunelol	3.65
3	Caryophyllene oxide	1.95
4	Torinelol	2.76
5	Germacra-4- trien-1-ol	12.57
6	Farnesol	1.6
7	Oplopanone	1.25
8	β -Acoradienol	3.81
9	Hydroxymarsupellol	2.4
10	Octadecane	3.8
11	Farnesyl acetate	7.68
12	Platambin	2.56
13	Hexahydrofarnesyl acetone	2.12
14	Valerenic acid	9.09
15	Corymbolone	7.42
16	Izophytol	8.66
17	Methyl hexadecanoate	0.98
18	Ethyl hexadecanoate	4.1
19	Hexadecanoic acid	18.51
20	Nonacosane	5.24
21	Heptacosane	4.61
22	β - Sitosterol	5.93

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Identification	Conforms to reference standard	CONFORMS	HPLC
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1	Total Caffeic acid derivatives	41.3mg/gr
	Chicoric acid	36 mg/gr
	Cafftaric acid	5.3 mg/gr
2	Total Alkamides	0.97 mg/gr

MICROBIAL ANALYSIS SPECIFICATIONS RESULTS METHOD

Bacterial Count			
<i>Staphylococcus aureus</i>	< 1000 CFU/g	CONFORMS	ISO 21149
<i>Escherichia coli</i>	< 1000 CFU/g	CONFORMS	
<i>Pseudomonas aeruginosae</i>	< 1000 CFU/g	CONFORMS	
Yeast and Mould			
<i>Candida albicans</i>	< 100 CFU/g	CONFORMS	ISO 16212
<i>Aspergillus fumigatus</i>	< 100 CFU/g	CONFORMS	

BaP	Limit 0.18 µg/kg	NOT DETECTED	Elissa
TOTAL PAHs (BaP, BaA, BbF,CHR)	Limit 0.2 µg/kg	NOT DETECTED	Elissa
PESTICIDES	Limit 0.01 mg/kg	NOT DETECTED	Elissa.
AFLATOXINS B1	Limit 2 µg/kg	CONFORMS	Elissa
TOTAL AFLATOXIN (B1, B2, G1, G2)	Limit 4 µg/kg	CONFORMS	Elissa

COMMENTS: This CO₂ total extract is a 100% pure and natural product. It does not contain any artificial ingredients or adulteration of any kind to the best of our knowledge. The analysis and statements herein constitute the most complete information available to Esencial®. This product is guaranteed by to Esencial® be of excellent quality.

DISCLAIMER: Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources Esencial® provides the information contained herein, but makes no representation as to its

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comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

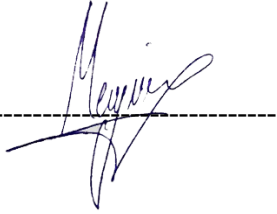
Prepared By: Ms. Megi Pashollari

Revised by: Mrs. Lindita Vrushi

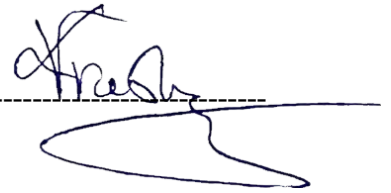
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