



RAW MATERIAL

Common name:	Peppermint
Latin name:	<i>Mentha piperita</i> L.
Botanical part:	Stems
Condition:	Dried, ground
Origin:	Bulgaria
Seasonality:	All year available



SOLVENT

Type:	Food grade solvent according to Directive 97/60/EC
Residue in extract:	Less than 0.1 g solvent/kg extract

EXTRACT

Product code:	BMin-70.1
Content:	The product is 100% natural high quality extract derived from raw material without any additives preserving natural microflora. It contains only the natural compounds occurred in the raw material.
Production:	Liquefied gas extraction below 25°C heat treatment
Standardization:	The extract complies with declared volatile oil content
Identification:	Mentha Piperita Extract CAS-No. 84082-70-2 EINECS-No. 282-015-4
Appearance:	Dark green clear oily liquid with strong characteristic smell of raw material
Volatile oil content:	Minimum 70 % v/w
Substitution:	1 kg extract is equal to 280-320 kg raw material

CHEMICAL COMPOSITION

PARAMETER	VALUE	
Essential oil (ASTA)	70 - 75% v/w	
Essential oil at 105° C	75 % w/w	
Solvent residue	< 0.1 g/kg	
Main compounds GC-MS: (above 1%)	1,8 cineole	3%
	cis-sabinene hydrate	4%
	Menthone	31%
	iso-menthone	4%
	Linalool+ β-burbone	2%
	Menthyl acetate	10%
	neo-menthol	2%
	β-caryophyllene	2%
	Menthol	21%
	Pulegone	3%
	Germacrene	2%
	Piperitone	1%
	Waxes, other extractable max.	30%
	Density @20 C°	935 g/l
	Refractive index	1.4766
Acid value	17.1 mg KOH/g	
Flash point	>61 C°	

Solubility: Well diluted in vegetable and other oils, partially in water alcohol mixture 40% vol. and not diluted in water.

Antioxidant activity: According DPPH free radical method 50% inhibition concentration IC₅₀, maximal percentage of inhibition and relative extracts concentration are:

IC ₅₀ , mg/ml	Maximal inhibition, mg/ml	At Concentration, %
0.331	1.2	91.8

Antimicrobial activity: Minimal inhibitory concentration (MIC) and Minimal bactericidal concentration (MBC) against different test microorganisms are:

Test microorganism	Origin	MIC, % w/v	MBC, % w/v
<i>Staphylococcus epidermidis</i>	Clinical isolate	0.2	0.2
<i>Staphylococcus aureus</i>	ATCC 6538	0.2	0.2
<i>Escherichia coli</i>	Food isolate	0.4	0.4
<i>Escherichia coli</i>	ATCC 8739	0.4	0.4
<i>Salmonella abony</i>	Clinical isolate	0.4	0.8
<i>Salmonella abony</i>	ATCC 6017	0.4	0.8
<i>Pseudomonas auruginosa</i>	Food isolate	0.8	>1.0
<i>Pseudomonas auruginosa</i>	ATCC 9627	0.8	>1.0
<i>Candida albicans</i>	Clinical isolate	0.4	0.4
<i>Candida albicans</i>	ATCC 10231	0.4	0.4

PACKAGE, STORAGE AND TRANSPORTATION

Single volume: 2.50 l and 6.25 l

Type: Aluminum bottle with epoxy phenolic inner coating.

Closure: PP screw cap with tamper evident tear-off locking flange, LDPE plug with pull-off ring.

Shelf life and storage: 2 years, store in cool, dark and dry place.

Transportation: Not dangerous good, no special regulations.

QUOTATION

Quoted price includes:

1. Extract batch
2. Declared extract quantity and quality
3. Labeled bottles with strip
4. Safety Data Sheet according to 2006/1907/EC
5. Product specification

Every batch GC-MS analysis can be performed upon request.

APPLICATION

This extract is edible and suitable for spicing of food products, in perfumery, cosmetics, etc. Product input could be in concentrated condition or diluted in vegetable oil (concentration according certain application). Filling rates for concentrated extract are 1-20 mg per kilogram food product.

LIABILITY

These data are given for customer's information only to the best of our knowledge but under exemption liability especially regarding infringement of or prejudice to third party rights through the use of this product.

This information is not a substitute for prior tests demonstrating the suitability of the product for the intended use. Users are responsible for ensuring the compliance with the applicable legislation. The COMERG™ extracts are raw materials for product formulation. Hence they are not intended for direct consumption in food and for undiluted topical application in cosmetics, perfumery and aromatherapy. Keep away from children.

MANUFACTURER

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