

# Monoterpenes

## CHEMICAL FAMILY

Monoterpenes are composed of two isoprene units of five carbon atoms each, totaling ten with at least one double bond. Because they are made up of 10 carbons with a varying number of hydrogens, they are fairly unstable and are prone to oxidation. You will find essential oils that are rich in monoterpenes as top or middle notes with a tendency to evaporate quickly.

### THERAPEUTIC PROPERTIES

ANALGESIC	ANTIBACTERIAL	ANTI-INFLAMMATORY
ANTI-FUNGAL	ANTIHISTAMINTIC	ANTIRHEUMATIC
ANTIMICROBIAL	ANTISEPTIC	ANTITUMOR
HYPOTENSIVE	INSECTICIDAL	PURGATIVE
RUBIFACIENT	SKIN ENHANCER	STIMULATING

### COMMON MONOTERPENES CHEMICALS

#### MOLECULAR STRUCTURES

cis-beta-ocimene	cis-alpha-ocimene	alpha-terpinene
gamma-terpinene	limonene	beta-phellandrene
alpha-pinene	beta-pinene	camphene
delta-3-carene	alpha-thujene	sabinene
para-cymene		

**ESSENTIAL OILS CONTENT OF MONOTERPENES  
MONOTERPENES % CONTENTS**

<b>Essential Oils</b>	<b>Percentage</b>
Grapefruit	93%
Silver Fir	92%
Bitter Orange	90%
Mandarin	90%
Tangerine	90%
Balsam Fir	83%
Angelica Root	80%
Lemon	80%
Frankincense	78%
Celery Seed	77%
Cypress	76%
Parsley	75%
Fleabane	73%
Elemi	72%
Galbanum	72%
Douglas Fir	70%
Nutmeg	68%
White Fir	65%
Lime	62%
Bergamot	55%

**ESSENTIAL OILS CONTENT OF MONOTERPENES  
MONOTERPENES % CONTENTS**

<b>Essential Oils</b>	<b>Percentage</b>
Juniper Berry	54%
Cistus	53%
Tea Tree	52%
Pine	51%
Black Pepper	50%
Blue Tansy	50%
Dill	50%
Spruce	50%
Caraway Seed	48%
Marjoram	44%
Yarrow	43%
Goldenrod	42%
Tsuga	42%
Ledum	40%
Eucalyptus Dives	39%
Fennel	38%
Myrtle	38%
Mugroot	37%
Thyme	37%
Marigold	36%

**ESSENTIAL OILS CONTENT OF MONOTERPENES  
MONOTERPENES % CONTENTS**

<b>Essential Oils</b>	<b>Percentage</b>
Spikenard	36%
Valerine	35%
Rosemary Verbenon	33%
Hyssop	30%
Neroli	30%
Cumin	29%
Rosemary	27%
Roman Chamomile	26%
Eucalyptus	24%
White Savory	24%
Ravensara	24%
Spearmint	24%
Rosalina	22%
Carrot Seed	22%
Rose	22%
Tarragon	22%
Niaouli	21%
Thuja	21%
Bay Laurel	28%
Ormenis	20%

**ESSENTIAL OILS CONTENT OF MONOTERPENES  
MONOTERPENES % CONTENTS**

<b>Essential Oils</b>	<b>Percentage</b>
Sage	20%
Cajeput	19%
Petitgrain	19%
Eucalyptus Radiata	18%
Coriander	17%
Garden Thyme	17%
Oregano	17%
Vitex	17%
Lavandin	16%
Lavender	16%
Marijuana	16%
Spanish Marjoram	16%
Ginger	13%
Helichrysum	11%
Peppermint	10%
Lemongrass	8%
Citronella	7%
Wild Tansy	7%
Cardamom	5%
Cedar Leaf	5%

ESSENTIAL OILS CONTENT OF MONOTERPENES  
MONOTERPENES % CONTENTS

Essential Oils	Percentage
Myrrh	5%
Blue Mallee	4%
Geranium	3%
Basil	3%
Catnip	3%
Cedar Bark	3%
Clary Sage	3%
German Chamomile	3%
Lemon Eucalyptus	3%
Melissa	2%
Moroccan Thyme	1%
Palmarosa	1%
Patchouli	1%