

THE CHAMOMILES – ROMAN and GERMAN

1. *Chamaemelum nobile* aka *Anthemis nobilis* (Roman Chamomile)
2. *Matricaria recutita* aka *Matricaria chamomilla* (German Chamomile aka Blue Chamomile)



Yellow-headed (single) Roman Chamomile



White-headed (double) Roman Chamomile



German Chamomile



German Chamomile being harvested

FAMILY: Asteraceae

DESCRIPTION AND BOTANICAL INFORMATION: Chamomile is a little confusing because there are two different species that are used in aromatherapy and both of them have more than one Latin name and more than one common name:

1. Roman Chamomile - *Chamaemelum nobile* or *Anthemis nobilis*, aka English Chamomile and True Chamomile. There are two varieties of Roman Chamomile known as yellow-headed or single Chamomile and the white-headed or double Chamomile

2. German Chamomile - *Matricaria recutita* or *Matricaria chamomilla*, aka German Chamomile and blue Chamomile

Don't confuse either of these with an essential oil called "Chamomile Maroc" which is distilled from the plant *Ormenis multicaulis* which is not any kind of true chamomile at all.

The chamomiles are very fragrant perennial herbs with small white flowers that have yellow centers; the flowers of Roman chamomile may be small and daisy-like or, in some varieties, shaped like small white pompoms while those of German chamomile are daisy-like. Roman chamomile is a low-growing ground cover while German chamomile reaches about two feet in height. Both Roman and German chamomile have feathery green leaves.

The chamomiles are native to Southern and Western Europe. German chamomile also occurs as a native species in parts of Asia. Both types are widely grown and the main essential oil production is from Eastern Europe, France, Italy, Britain, Chile, and the US. German chamomile displays great variation in its profile of components depending on where it is grown; those with high levels of α -bisabol are generally preferred. Roman chamomile also varies widely in its profile of constituents based on where it is grown but most almost all of it has high levels of esters (angelate and butyrate esters).

HISTORY AND FOLKLORE: Chamomile is a solar herb, meaning that its energetic associations are with the sun; in Egypt it was sacred to Ra and Roman chamomile was one of the 9 sacred herbs of the Saxons, who called it "maythen". In European folk culture, it's been called the "plant doctor" because it seems to help other plants growing near it. In Tudor England, chamomile lawns became popular and the plant is still a very popular English garden herb. The chamomiles have long been used in European herbal medicine for their relaxing and soothing properties and for stomach complaints and women's problems. In the middle ages, chamomile was a popular strewing herb. Roman chamomile has been used in traditional Iranian medicine (Unani-tibb Medicine) as a remedy for hysteria and rheumatism. Today, chamomile is one of the most widely used herbs in the world and is valued for its calming, sleep-inducing and digestive properties.

Until about the mid-1900's Chamomile essential oil was used as a natural antiseptic in English and European hospitals. Chamomile has also been a popular ingredient in modern over-the-counter pharmaceutical preparations and cosmetics.

EXTRACTION: Both types of Chamomile essential oil are extracted by steam distillation of the aerial parts of the flowering plant.

PHYSICAL and AROMATIC PROPERTIES: Roman chamomile is a clear yellowish to faintly blue mobile liquid with a warm, sweet, fruity, herbaceous scent that blends well with bergamot, clary sage, rose, lavender, geranium and neroli. German chamomile is an inky blue, viscous liquid with some of the same

aromatic notes but the scent is stronger and less pleasing. German chamomile blends well aromatically with marjoram.

MAIN CONSTITUENTS OF ROMAN CHAMOMILE (Britain):

<u>Name</u>	<u>%</u>
<u>Isobutyl butyrate</u>	20.52
<u>Isoamyl angelate</u>	17.38
<u>3-Methylpentyl angelate</u>	16.22
<u>Isobutyl angelate</u>	13.01
<u>alpha-Terpinene</u>	4.51
<u>Chamazulene</u>	4.39
<u>Terpinolene</u>	3.85
<u>Anthemol</u>	3.22
<u>gamma-Terpinene</u>	2.86
<u>para-Cymene</u>	2.01
<u>beta-Pinene</u>	1.60
<u>alpha-Pinene</u>	1.58
<u>beta-Phellandrene</u>	1.38
<u>Camphene</u>	1.37

MAIN CONSTITUENTS OF GERMAN CHAMOMILE (Bulgaria):

<u>Name</u>	<u>%</u>
<u>Farnesene (unknown isomer)</u>	27.72
<u>Chamazulene</u>	17.64
<u>alpha-Bisabolol oxide B</u>	11.17
<u>alpha-Bisabolol</u>	9.55
<u>alpha-Bisabolol oxide A</u>	8.93
<u>delta-Cadinene</u>	5.20
<u>alpha-Muurolene</u>	3.41
<u>(E)-beta-Ocimene</u>	1.73
<u>gamma-Muurolene</u>	1.31
<u>beta-Caryophyllene</u>	0.50
<u>alpha-Copaene</u>	0.24
<u>Limonene</u>	0.10
<u>1,8-Cineole</u>	0.10
<u>para-Cymene</u>	0.05
<u>alpha-Terpinene</u>	0.01

WESTERN ACTIONS WITH EMPIRICAL SUPPORT:

Roman chamomile –

Antispasmodic (smooth muscle, e.g. uterus, where it blocks contractions)
Eupeptic
Sedative/calming
Anti-inflammatory
Antibacterial

German Chamomile –

Anti-cancer potential
Anti-inflammatory
Protects against gastric ulcer
Antibacterial/antifungal
Antiallergenic
Antimutagenic
Decreases uterine contractions (in rats)
Stimulates white cell production
Inhibits action of specific human cytochrome P450 enzymes.

A sampling of research:

Ganzeria, M. et al. (2006) Inhibitory effects of the essential oil of chamomile (*Matricaria recutita* L.) and its major constituents on human cytochrome P450 enzymes. *Life Sciences*, 78 (8): 856-861

McKay, D.L. & Blumberg, J.B. (2006) Review of the bioactivity and potential health benefits of chamomile tea (*Matricaria recutita* L.). *Phytotherapy Research*, 20 (7): 519-530

Owlia, P. et al. (2007) Antistreptococcal and antioxidant activity of essential oil from *Matricaria chamomilla* L. *Research Journal of Biological Sciences*, 2 (2): 155-160.

Piccaglia, R. et al. (1993) Antibacterial and antioxidant properties of Mediterranean aromatic plants. *Industrial Crops and Products*, 2 (1): 47-50.

Rossi, T. et al. (1988) Sedative, anti-inflammatory and anti-diuretic effects induced in rats by essential oils of varieties of *Anthemis nobilis*: A comparative study. *Pharmacological Research Communications*, 20 (supp. 5): 71-74.

TRADITIONAL AROMATHERAPY ACTIONS: The two oils are described by aromatherapists as having similar, but not exactly the same, properties. They are both described as anti-inflammatory, antispasmodic (smooth and skeletal muscle) and sedative/calming but German Chamomile is the most powerful anti-

inflammatory, while Roman is the best antispasmodic and has the most powerful calming action.

The anti-inflammatory properties of chamomile essential oil come from chamazulene, a blue colored compound, which is much higher in German chamomile and which only develops in the distillation process when the herb is heated to high temperatures under pressure (so you don't get chamazulene by drinking chamomile tea or taking a tincture).

Both types of chamomile have analgesic properties; both are antineuralgic and could be used in formulas for sciatica and Bell's palsy. Both have some antibacterial properties but I don't use them specifically for that.

Roman chamomile has a beneficial effect on appetite and digestion and it is also said to be a nervine tonic.

Both chamomiles are said to be emmenagogues and German chamomile has been widely used in Europe for centuries as a remedy for painful periods or scanty periods but at least some people report an amphoteric property for Roman chamomile, which is said to have regulatory effects on the menstrual cycle that make it good for both scant and heavy menstruation.

Both are said to be cholagogues (stimulate bile) and hepatics; both are sudorific (Roman more so) and both are vulnerary.

German chamomile is described as an immune tonic.

TYPICAL WESTERN INDICATIONS: Roman chamomile is widely used for nervousness and anxiety and especially for cases of nervous indigestion and related problems such as Irritable Bowel Syndrome and colitis. It calms the mind and the digestive system, relieves spasm and cramping and will relieve many kinds of adult colic (combine with basil, peppermint and/or bergamot for this purpose).

This is the classic essential oil to use for earache – mix Roman chamomile with vegetable oil and rub it all around the ear. The same blend is good for toothaches, TMJ, and stings or bites (mix with lavender for its antivenemous qualities).

For muscle and joint pain German Chamomile has a synergistic effect with Rosemary.

Both the chamomiles are used for muscle pain and spasm, acne and other skin problems, menstrual problems, arthritis/rheumatism, insomnia, stress and stress related problems.

CHINESE MEDICINE CORRELATES

Energy: both are cool with neutral moisture (Mojay)

Main Element: Roman is in the Wood element; German is Metal
Main Spheres of Action: Roman – Mind, Body, Spirit
German - Body

CM ACTIONS:

— Smooths the flow of qi (both types)
— Clears Heat (both types)

CM INDICATIONS:

The difference in actions between Roman and German chamomile is especially well explained in the Chinese Medicine model by looking at the different elemental associations of the two oils.

The Metal Element governs the Lungs so if you want an anti-inflammatory and/or antispasmodic effect in the lungs, use German chamomile– I would put a drop of it in inhalations for the respiratory tract.

Roman chamomile is under the Wood Element, which is the Liver, so if you want to strengthen or decongest the liver, or get an antispasmodic effect in muscle, use Roman chamomile. It's a better choice also for digestive problems.

The other important thing about both chamomiles in Chinese Medicine is that they are both able to smooth the flow of Qi and they both clear heat – this is the Chinese Medicine way of saying that they are antispasmodic and anti-inflammatory, so they are both used in Chinese Medicine for relaxing, for easing spasm, and for relieving pain, again with German being the preferred choice when these actions are desired in the respiratory system and Roman when you are targeting the muscles or want to have a calming soothing effect on the nervous system and psyche.

Subtle Actions: Roman chamomile has stronger subtle effects than does German. It has a very strong effect on the solar plexus which is the vital center of our needs and wants. The solar plexus is a place where a lot of tension and frustration are stored – having to do with unmet needs and wants. Sometimes people who are tense and frustrated will actually have painful spasms in the solar plexus, sometimes described as a dull ache in that area, and these can often be helped by Roman chamomile applied in a warm compress or diluted in vegetable oil and massaged over the area.

Since Roman Chamomile is Wood element oil, it has a special resonance with the Hun, which is the Spirit of the Wood Element and is also called the Ethereal Soul or the Yang Soul. The Hun is the animating agent of all mental processes, including dreams and visions and imagination. It facilitates decision making, planning, and emotional balance. When the Hun is out of balance you may see anger, digestive problems, sleep disturbance (too much or not enough), depression or erratic emotions – Roman chamomile can help in blends for people with these issues.

BEST USES BY SYSTEM:

SKIN CARE – acne, boils, slow healing wounds, thread veins, dermatitis, rashes, bites and stings, itching, pressure ulcers

MUSCULOSKELETAL COMPLAINTS - muscle pain and spasm, cramps, fibromyalgia, sprains, arthritis, restless legs, carpal tunnel

DIGESTIVE SYSTEM COMPLAINTS – dyspepsia, colic, indigestion, stress-related digestive problems

NERVOUS SYSTEM ISSUES: neuralgia, insomnia, headache/migraine, nervous tension

ENDOCRINE AND REPRODUCTIVE COMPLAINTS - dysmenorrhea, menorrhagia, menopausal stress, PMS

RESPIRATORY SYSTEM COMPLAINTS – German chamomile can be helpful for decreasing inflammation and spasm in the respiratory system so it can be added to blends for bronchitis, colds/flu, sinusitis and spasmodic coughing.

MENTAL/EMOTIONAL - Roman chamomile is generally best for mental/emotional applications because it is more calming; use it to help with stress, anger, tension, anxiety, agitation, restlessness, and even oppositional behavior.

OTHER: Roman chamomile is often used externally diluted in vegetable oil for a rub around a painful ear or on the gums around a painful tooth.

SAFETY DATA: Both chamomiles are generally non-toxic and non-irritant for most people but they can **both provoke allergic reactions/dermatitis in some, especially in people who have allergies to other members of the Asteraceae family, such as ragweed.** I recommend sequential patch-testing before using either type on large areas of skin; use in maximum dilutions of 1%.

Ironically, although both types are considered emmenagogue, both are on Tisserand & Balacs' list of essential oils that are safe to use during pregnancy; however **some authors recommend avoiding during the first trimester of pregnancy and I recommend adhering to that advice.**

Roman chamomile essential oil is especially prone to oxidation; storage in the refrigerator may slow this process.

DRUG INTERACTIONS:

All Routes -**Since German chamomile essential oil may have an inhibitory effect on CYP2D6 enzymes when taken by any route, reactions with medications, supplements, or herbs that are metabolized in that system are at least theoretically possible by all routes. Examples of drugs that may have interactive effects include Donezepil, Propranolol, Alprenolol, Phenacetin,**

Codeine, Lidocaine, tricyclic antidepressants, Haloperidol Metoclopramide and many others. (Tisserand and Young, 2014)

Oral Route: German chamomile inhibits CYP1A2, CYP3A4 and CYP2C9 enzymes and should not be used orally in conjunction with drugs utilizing these enzymes. Examples of drugs in these groups include Tacrine, Propranolol, Acetaminophen, Warfarin, tricyclic antidepressants, Haloperidol, Diazepam, Caffeine, Naproxen and a great many others in many classes. (Tisserand and Young, 2014).

If there is any question about interactions with medications, supplements, or herbs the person's physician should be consulted before use of German chamomile.