

CHAMOMILE



Latin Names: *Matricaria recutita*, Synonymous with *Chamomilla recutita*, and *Matricaria chamomilla*

Family Name: Asteracea

Common Names: German Chamomile, Chamomile, Wild Chamomile, Pin Heads, Scented May Weed

Botanical Description:

Matricaria recutita grows naturally in grassy areas and wastelands. The seeds can survive many years below the soil and will reseed in areas even after the soil has been consistently disturbed by cultivation [1]. *Matricaria recutita* is an annual that grows 6-24 inches and is apple scented [2,3]. The name chamomile is derived from the Greek words “chamos” meaning ground, as in the location where it grows, and “melos” meaning apple, for its scent [4]. The stems are smooth and the leaves are divided into 2-3 pinnate branches. *Matricaria recutita* flowers from May to October. The daisy-like flower heads are a composite of 15 white florets and a central receptacle composed of yellow tubular inflorescences. *Matricaria recutita* has a hollow receptacle, which helps to identify it from its Roman cousins, *Chamaemelum nobile*, which have a solid receptacle. The white florets grow laterally then begin to hang downward over time [5].

Medicinal Uses:

Traditionally, *Matricaria recutita* has been used for colic, gout, indigestion, fevers, insomnia, arthritis, sciatica, headaches, cramps and flu [3]. The most common internal use is as a tea for digestive complaints such as indigestion, flatulence and bloating. The most common external uses are for inflammatory dermatosis, wound treatment and ano-genital inflammation [7]. Chamomile translated in German means, “capable of anything,” showing the indispensable nature of this herb. In Germany, where *Matricaria recutita* has been researched and used clinically, many studies have shown the efficacy of its use as an antiphlogistic, spasmolytic, ulcer protector, bactericidal and fungicidal [5]. In the Eastern United States, *Matricaria recutita* flowers have been used as a folk cancer remedy [3].

In animal trials, *Matricaria recutita* applied topically in olive oil elicited faster wound healing [9].

Additionally, when given in the drinking water of experimental rats, the animals healed faster than the controls [10].

Some recent clinical trials using *Martricaria recutita* or its constituents have shown its benefit in treating anxiety, functional dyspepsia, hot flushes associated with menopause and its use as an anti-inflammatory. In a review of clinical studies, *Matricaria recutita* was shown to have equal or higher effect size than anxiolytic drugs such as benzodiazepine, and buspirone [11]. In a clinical trial of STW-5II, an herbal preparation, using *Matricaria recutita* along with other herbs, researchers showed that the preparation effectively relieved the symptoms of functional dyspepsia [12]. A clinical study of Climex, an herbal preparation of *Matricaria recutita* and *Angelica sinensis*, showed a marked reduction in hot flushes, sleep disturbances and fatigue associated with menopause [13]. In a study to determine the mechanism of anti-inflammatory action oral doses of matracin, the sesquiterpene lactone constituent, were given to human volunteers. After administration of matracin, participants had a plasma elevation of chamazulene carboxylic acid, a cyclooxygenase (COX) 2 inhibitor. This research study also showed that matracin converts into chamazulene carboxylic acid in gastric fluid. It is this conversion product that is responsible for the COX-2 anti-inflammatory actions of *Matricaria recutita* [14].

Plant Distribution:

Matricaria recutita is native to southern and eastern Europe across to western Asia. It is naturalized to all of Europe, North America and Australia. The plant is agriculturally cultivated in Argentina, Egypt, and throughout Europe [5].

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Chemical Constituents:

Matricaria recutita contains essential oils, flavanoids, Sesquiterpene lactones, coumarins and mucilage [5]. From the essential oils, (-)-alpha-bisabolol, bisabololoxide A, B & C, chamazulene, chamaviolin, and spathulenol have been isolated [5,6]. Flavanoids such as apigenin, leuteolin and quercetin have been identified. Also, the sesquiterpene lactones matracin and matricarin have been isolated, along with coumarins and mucilages [7].

Actions:

Matricaria recutita acts as a carminative, stomachic, antibacterial, bacteriostatic, nervine, antispasmodic, muscle relaxant, anti-inflammatory, wound healing promoter, skin metabolism stimulator and deodorant [7,8]

Pharmacology:

In a study of rat stomach mucosa damaged by ethanol, the constituent alpha-bisabolol reduced the damage by using potassium ATP channel activation [15]. In other tests of *Matricaria recutita*'s constituents, chrysin and apigenin caused anxiolytic effects in mice and these effects were shown *not* to be caused by the interaction with the GABA Benzodiazepine receptors. Researchers believe the interaction may be due to interaction with GABA A receptors [16]. In an animal experiment to test wound healing in rats, *Matricaria recutita* administration healed ulcers faster than corticosteroids [17]. When the essential oils were extracted, 21 constituents were found to collaboratively show antifungal activity against *Aspergillus niger* [18]. In micro assay testing, it showed antibacterial activity against *Campylobacter jejuni*, a common enteric infector [19].

Contraindications:

Individuals with allergic reactions to other Asteracea may experience similar reactions to *Matricaria recutita* [7]. Use during pregnancy has not been evaluated.

Plant Parts Used:

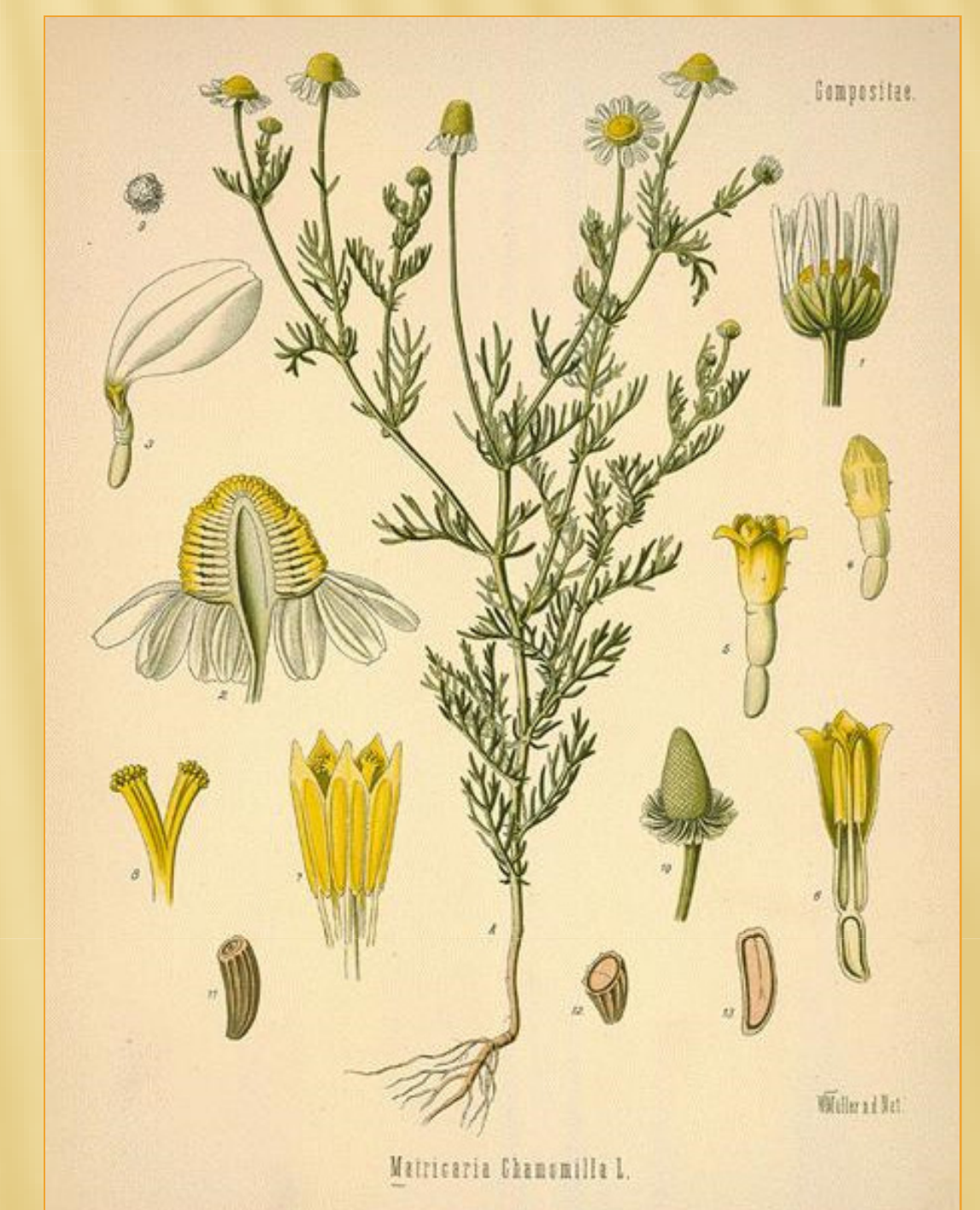
Medicinally, the flower head, or flos, is used. [5].

Pharmacy:

Infusion: The German Commission E recommends pouring 150mL boiling water over 3 grams dried flos, and allowing it to sit for ten minutes in a covered container. Drink the strained infusion 3 – 4 times daily [5,7,8].

Tincture: According to the British Herbal Compendium, a tincture can be made in a ratio of 1 gram commuted flos to 5 mL of 45% ethanol. 3-10 mL may be taken up to 3 times per day [7].

Dried Flos: 2-4 grams of the dried flower heads may be taken up to 3 times per day. If taken as a single dose, 5 grams may be taken [7].



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