

APPLICATIONS

- Relaxation and Stress-Management Support
- Healthy Sleep Support
- Antioxidant Support
- Healthy Inflammatory-Response Support
- Healthy Mood Support



INTRODUCTION

Babuna is a hydro-ethanol extract made from *Matricaria recutita* flowers. *M. recutita* belongs to the Asteraceae/Compositae family, and its common name is German chamomile. Synonyms include *Matricaria chamomilla* and *Chamomilla recutita*.¹ *M. recutita* is native to Asia and Europe, and is included in the pharmacopoeia of 26 countries.^{2,3} Due to its pleasant taste and aroma, it is also used in foods and cosmetics.³

Chamomile flower (*M. recutita*) has been used for centuries to support health. The Greek physician Dioscorides recommended it for health support in the first century C.E.⁴ Ancient Egyptians, Greeks, and Romans all used chamomile for health support,⁵ and the Anglo-Saxons considered it one of their nine most important herbs.³ Historically, traditional use has included neurological, gastrointestinal, respiratory, liver, and healthy inflammatory-response support.⁶

The word chamomile comes from the Greek *chamaimēlon*, meaning “apple of the ground” due to the mild apple-like scent of its flowers.² The plant is still in widespread use; more than a million cups of chamomile-flower tea are consumed per day

worldwide.⁷ In addition, chamomile has been approved by the German Commission E for health support.⁸

Constituents of chamomile include flavonoids such as apigenin and luteolin, terpenes such as geraniol and menthol, volatile oils such as isopentyl and isobutyl isobutyrate, organic acids such as carboxylic acid and sulfonic acid, coumarins such as umbelliferone and alpha-bisabolol, polysaccharides, amino acids, minerals, gamma-aminobutyric acid (GABA), and other compounds.²

Babuna is made at NutraMedix's U.S. manufacturing facility using a specialized proprietary extraction process that optimizes the constituents of the herbs in their original, unprocessed state to obtain broad-spectrum concentration. Because our extracts are made in our own facility, we control all aspects of quality, including stringent ID testing, microbial testing, and heavy-metal testing. NutraMedix rigorously follows current good manufacturing practices (cGMP), as do our suppliers.

SUPPORT FOR RELAXATION AND STRESS MANAGEMENT

German chamomile flowers (*M. recutita*) may help maintain relaxation and support healthy stress management.⁵ The constituents apigenin and luteolin may be particularly helpful in supporting healthy stress management because of their affinity with GABA_A receptors.⁹

In a double-blind, randomized trial, 90 healthy college students were assigned to either a chamomile capsule (100 mg) three times per day or a positive control, from day 21 of the menstrual cycle until the onset of menstruation. After two cycles, the chamomile group experienced significantly better premenstrual stress-management support than the control group.⁹

In another double-blind, controlled trial, 57 participants were randomly assigned to chamomile extract capsules (220 mg) or a placebo. Participants were given one capsule per day for the first week, increasing to two capsules per day for the second week. Depending on response, the dose was increased by one capsule per week, for a maximum of five capsules. The researchers concluded that the chamomile group experienced

significantly improved healthy stress-management support compared to the placebo group.*¹⁰

HEALTHY SLEEP SUPPORT

German chamomile flowers (*M. recutita*) may help support healthy sleep quality.* In a single-blind, controlled trial with 73 healthy postpartum women, the participants were randomly assigned to standard care plus single-ingredient chamomile tea, or to standard care alone. The chamomile group consumed 1 cup of chamomile tea daily for 2 weeks. Compared to those in the control group receiving standard care only, those who consumed chamomile tea experienced significantly more support for healthy sleep, according to a standardized scale of sleep quality.*⁵

M. recutita has also been shown to help support healthy sleep quality in the elderly.* In a single-blind study, 60 participants age 60 and older were randomly assigned to either two capsules of chamomile extract per day (200 mg each) or a placebo control, for 28 days. Compared to the control group, participants in the chamomile group experienced significant support for maintaining healthy sleep quality.*¹¹

OTHER USES

ANTIOXIDANT SUPPORT

German chamomile flowers (*M. recutita*) may help with antioxidant support, as evidenced by DPPH free radical scavenging assay,³ with luteolin showing the strongest support.*¹² Laboratory studies attribute this to the maintenance of antioxidant enzymes, NRF2 signaling, and CD4+ T cell activation, already within the normal range.*⁶

In a study with rats, chamomile tea helped support and maintain superoxide dismutase (SOD), glutathione peroxidase (GPx), and catalase (CAT), already within the normal range, compared to a control group.*¹³ Individual constituents such as luteolin, chalmuzene, and apigenin may help with both antioxidant support and healthy inflammatory-response support.*⁶

HEALTHY INFLAMMATORY-RESPONSE SUPPORT

German chamomile flowers (*M. recutita*) may help support a healthy inflammatory response through the maintenance of IL-1beta, IL-6, and TNF-alpha-induced NO levels already within the normal range, according to laboratory studies with mouse and human cells.*^{6,8} Chamomile flowers may also help maintain NF-kappaB

already within the normal range, which may help maintain NO production and iNOS expression already within the normal range.*⁸

In addition, chamomile flowers may help maintain prostaglandin E2 and COX-2 already within the normal range.*⁷ The constituents luteolin, chalmuzene, apigenin, and alpha bisabolol may help with antioxidant support in addition to supporting a healthy inflammatory response.*^{6,9}

HEALTHY MOOD SUPPORT

German chamomile flowers (*M. recutita*) may help support a healthy mood.* In a single-blind, controlled trial, postpartum participants were randomly assigned to standard care plus chamomile tea or to standard care alone. The chamomile group consumed 1 cup of chamomile tea daily for 2 weeks. Compared to those in the control group receiving standard care only, the chamomile group experienced significantly more support for healthy mood and sleep.*⁵

In a double-blind, randomized trial, researchers examined the effects of a chamomile capsule (100 mg) taken three times per day for 7 days on premenstrual support for healthy mood and stress management.* The capsules were taken during the week before menstruation, for two consecutive menstrual cycles. Compared to the control group, the chamomile group experienced significant support for stress management and a healthy mood.*⁹

SAFETY AND CAUTIONS

M. recutita is one of the most commonly used herbs worldwide, and is generally well tolerated.¹⁴ It is generally recognized as safe (GRAS) in the United States.^{7,15} Adverse effects are uncommon, but may include nausea or dizziness.¹⁶ It may also cause allergic reactions in those sensitive to other members of the Asteraceae/Compositae family, such as ragweed.¹⁴ In a clinical trial involving 3,851 participants, 3.1% of those taking chamomile experienced an allergic reaction.¹¹

M. recutita should not be taken concurrently with cyclosporine, as it may increase blood levels of cyclosporine.¹⁷ It may also inhibit the activity of CYP2C9, CYP2D6, CYP3A4, and CYP1A2.^{1,18} In addition, *M. recutita* may increase the levels and effects of warfarin, as described in one case report.¹ In vitro studies show that it can also inhibit CYP3A4 and CYP1A2, which may explain a rise in INR.¹⁸ Theoretically, *M. recutita*

may have interactions with antidepressant and anxiolytic medications.¹

Safety is not documented in breastfeeding or pregnant women, or in children under age 3, due to insufficient safety research.

***This statement has not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, or prevent any diseases.**

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NutraMedix

SHAKE WELL BEFORE EACH USE:

Put 15 drops in 4 oz (120mL) of water and wait one minute before drinking. May be taken several times per day as needed, or 30 drops at bedtime, or as directed by your physician. Stop use if adverse reactions develop. Keep out of reach of children.

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BABUNA

FROM CHAMOMILE CALMING/SLEEP SUPPORT †

Dietary Supplement

1 fl oz. (30mL)

PROFESSIONAL USE ONLY

Supplement Facts

Serving Size 30 drops
Servings Per Container 20

Amount Per Serving
Chamomile flower extract 1.5 mL*

*Daily Value not established

Other ingredients: mineral water, ethanol (20-24%)

NutraMedix

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Lot #
Exp.