

APPLICATIONS

- Liver Support
- Metabolic Support
- Antioxidant Support
- Inflammatory Response Support
- Microbial Support
- Mood Support



INTRODUCTION

Dandelion is a hydro-ethanol extract from the leaves of *Taraxacum officinale*. It belongs to the Asteraceae/Compositae family and is native to Europe, though it is widespread throughout the northern hemisphere. The common name of dandelion comes from the French dent de lion, or lion's tooth, due to the serrated edges of the leaves.¹

T. officinale (leaf) contains polysaccharides such as PD1-1;² phenolic compounds such as monocatechol tartaric and dicaffeoyl tartaric acids, the latter of which is more widely known as chicoric acid; sterols such as beta-sitosterol and stigmasterol; flavonoid glycosides such as quercetin; triterpenoids such as alpha-amyrin; coumarins such as cichoriin and aesculin; and sesquiterpene lactones.³⁻⁶ The main sesquiterpene lactone in the leaf is taraxinic acid beta-D-glucopyranosyl ester.⁴ *T. officinale* contains many amino acids, though primarily L-Asparagine and L-Proline; the only essential amino acid not present in dandelion leaf is L-Methionine.⁷

Dandelion is made at our U.S. manufacturing facility. 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.

LIVER SUPPORT

Mouse studies have shown that *T. officinale* (leaf) may help with liver support,⁸ helping maintain aspartate transaminase (AST), alanine aminotransferase (ALT), and alkaline phosphatase (AKP) already within the normal range.^{9,10} It may also help to maintain hepatic triglyceride levels already within the normal range.¹⁰ Rat studies have shown that *T. officinale* may help to support and maintain liver health.^{11,12} One rat study found that liver support from the ethanol leaf extract was dose-dependent.¹² Much of the liver support may be due to antioxidant support and healthy inflammatory response support, helping to maintain superoxide dismutase (SOD) and glutathione (GSH) already within the normal range,⁹ which will be covered in more detail, below.*

METABOLIC SUPPORT

T. officinale may help with metabolic and cardiovascular support.¹³ In a study with rats, dandelion leaf helped to support normal vasodilation.¹⁴ *T. officinale* may also help to maintain nitric oxide (NO) and endothelial nitric oxide synthase (eNOS) already within the normal range.¹⁵ The leaf may help with healthy lipid support, maintaining cholesterol and triglyceride levels already within the normal range.^{14,16,17} In addition, in vitro studies have showed that several constituents from *T. officinale*, particularly chicoric acid, may help to maintain alpha-amylase and alpha-glucosidase levels already within the normal range.^{3,18} The sesquiterpene lactone taraxacolide-beta-D-glucoside may help to maintain blood sugar levels already within the normal range.³

ANTIOXIDANT SUPPORT

T. officinale may contribute antioxidant support, as measured in vitro by thiobarbituric acid reactive substances (TBARS) in human plasma, which is attributed to the phenolic compounds.¹⁹ Antioxidant support was also confirmed by cobalt protoporphyrin (CoPP) for the water extract, and by tin protoporphyrin (SnPP) for the ethanol extract,²⁰ as well as by ABTS, DPPH, and FRAP assays.¹⁵ Its antioxidant support may contribute to the maintenance of Nrf2 function already within the normal range,²⁰⁻²² which may assist with neurological support.²¹ In a rat study, rats were given leaf or petal fractions of *T. officinale*. The rats were given the extract for four weeks, which contributed antioxidant support, as quantified by TBARS assay in the spleen and brain.¹⁴ Compared with the root, the leaf extract has significantly higher polyphenol and flavonoid content.⁴

INFLAMMATORY RESPONSE SUPPORT

Antioxidant support and healthy inflammatory response support often go together, as shown in the subsequent in vitro studies. *T. officinale* polysaccharides TOP 1 and TOP 2 may help with both antioxidant and anti-inflammatory support by maintaining iNOS and TNF-alpha already within the normal range.^{23,24} *T. officinale* may help maintain IL-1beta and IL-6 already within the normal range.^{9,10} *T. officinale* may also help to influence cytokine expression, maintaining NF-kappaB and Nrf2 already within the normal range.^{25,26} The sesquiterpene lactone taraxinic acid beta-D-glucopyranosyl ester, found in the leaf extract, may help to maintain Nrf2 function already within the normal range.⁴

MICROBIAL SUPPORT

In vitro studies have shown that oligosaccharides from dandelion may help with antimicrobial support,²⁷ including support for organisms of varied gram status and with a variety of morphological forms.^{28,29} Dandelion may also help with support for diverse organism types.^{29,30}

MOOD SUPPORT

In mouse studies, the water extract of *T. officinale* leaves and roots helped support a dose-dependent healthy mood, attributed to neuroendocrine support and maintenance of BDNF and MKP-1 already within the normal range.^{31,32}

SAFETY AND CAUTIONS

Dandelion is generally well tolerated, with the most common side effect being gastrointestinal symptoms such as heartburn, stomach discomfort, or diarrhea.¹ It may have additive effects with anticoagulant, antiplatelet, and hypoglycemic drugs, may increase levels and reduce excretion of lithium, may increase the risk of hyperkalemia when taken with potassium-sparing diuretics, and may lower blood levels of quinolone antibiotics.¹ Dandelion may increase levels of drugs metabolized by CYP1A2 and CYP3A4.^{1,33}

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

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

NutraMedix

SHAKE WELL BEFORE EACH USE:
Put 30 drops in 4 oz (120 mL) of water and wait one minute before drinking. May be taken 2-3 times per day or as directed by your physician. Do not use if pregnant or nursing. Stop use if adverse reactions develop. Keep out of reach of children.

DANDELION

DETOX SUPPORT[†]

Dietary Supplement

2 fl oz. (60 mL)

Supplement Facts
Serving Size 30 drops
Servings Per Container 40

Amount Per Serving	
Dandelion leaf extract	1.5 mL*

*Daily Value not established

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

NutraMedix
Jupiter, Florida 33458 USA
www.nutramedix.com
561-745-2917

Lot #
Exp.

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

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