



NATURAL HEALTH PRODUCT

DANDELION - *TARAXACUM OFFICINALE*

This monograph is intended to serve as a guide to industry for the preparation of Product Licence Applications (PLAs) and labels for natural health product market authorization. It is not intended to be a comprehensive review of the medicinal ingredient.

Notes

- ▶ Text in parentheses is additional optional information which can be included on the PLA and product label at the applicant’s discretion.
- ▶ The solidus (/) indicates that the terms and/or statements are synonymous. Either term or statement may be selected by the applicant.

Date October 30, 2018

Proper name(s), Common name(s), Source material(s)

Table 1. Proper name(s), Common name(s), Source material(s)

Proper name(s)	Common name(s)	Source material(s)		
		Proper name(s)	Part(s)	Preparation(s)
<i>Taraxacum officinale</i>	<ul style="list-style-type: none"> ▶ Common dandelion ▶ Dandelion ▶ Lion's-tooth 	<i>Taraxacum officinale</i>	<ul style="list-style-type: none"> ▶ Leaf ▶ Root ▶ Whole plant 	Dried

References: Proper name: USDA 2018, McGuffin et al. 2000; Common name: USDA 2018, McGuffin et al. 2000, Wiersema and León 1999; Source material: Blumenthal et al. 1998, BHC 1992.

Route of administration

Oral

Dosage form(s)

This monograph excludes foods or food-like dosage forms as indicated in the Compendium of Monographs Guidance Document.

Acceptable dosage forms for the age category listed in this monograph and specified route of administration are indicated in the Compendium of Monographs Guidance Document.



Use(s) or Purpose(s)

LEAF

- ▶ Traditionally used in Herbal Medicine to increase the amount of urine to achieve flushing of the urinary tract as an adjuvant in minor urinary complaints (EMA 2009).
- ▶ (Traditionally) used in Herbal Medicine as a diuretic (Mills and Bone 2005; Hoffmann 2003; BHC 1992; BHP 1983).
- ▶ (Traditionally) used in Herbal Medicine as a laxative (aperient) (Mills and Bone 2005; Hoffmann 2003; BHP 1983).
- ▶ (Traditionally) used in Herbal Medicine to help increase bile flow (cholagogue) (Godfrey et al. 2010; Mills and Bone 2005; Hoffmann 2003; BHC 1992; BHP 1983).
- ▶ (Traditionally) used in Herbal Medicine to help treat digestive upset (dyspepsia) (Godfrey et al. 2010; Mills and Bone 2005; BHC 1992; Grieve 1971).

The following combined use(s) or purpose(s) is/are also acceptable:

(Traditionally) used in Herbal Medicine to help increase bile flow (cholagogue) and treat digestive upset (dyspepsia) (Godfrey et al. 2010; Mills and Bone 2005; Hoffmann 2003; BHC 1992; BHP 1983; Grieve 1971).

ROOT

- ▶ (Traditionally) used in Herbal Medicine as an alternative to help relieve dermatological conditions, such as eczema (Wichtl 2004; Blumenthal et al. 2000; Ellingwood 1919; Felten and Lloyd 1898).
- ▶ (Traditionally) used in Herbal Medicine as a diuretic (Mills and Bone 2005; Hoffmann 2003; BHP 1983; Ellingwood 1983; Wren 1907).
- ▶ (Traditionally) used in Herbal Medicine as a laxative (aperient) (Godfrey et al. 2010; Mills and Bone 2005; Hoffmann 2003; BHC 1992; BHP 1983).
- ▶ (Traditionally) used in Herbal Medicine to help increase bile flow (cholagogue and cholagogue) (Hoffmann 2003; BHC 1992; BHP 1983; Ellingwood 1983).
- ▶ (Traditionally) used in Herbal Medicine to help stimulate appetite (Godfrey et al. 2010; EMA 2009; ESCOP 2003; BHC 1992; Grieve 1971).
- ▶ (Traditionally) used in Herbal Medicine to help treat digestive upset (dyspepsia) (Godfrey et al. 2010; Mills and Bone 2005; BHC 1992; Grieve 1971).

The following combined use(s) or purpose(s) is/are also acceptable:

- ▶ (Traditionally) used in Herbal Medicine as a diuretic and a laxative (aperient) (Godfrey et al. 2010; Mills and Bone 2005; Hoffmann 2003; BHP 1983; Ellingwood 1983; BHC 1992; Wren 1907).
- ▶ (Traditionally) used in Herbal Medicine to help increase bile flow (cholagogue and cholagogue), treat digestive upset (dyspepsia) and stimulate appetite (Godfrey et al. 2010; EMA



2009; ESCOP 2003; Hoffmann 2003; BHC 1992; BHP 1983; Ellingwood 1983; Grieve 1971).

WHOLE PLANT

- ▶ Used in Herbal Medicine as a diuretic (WHO 2007; Wichtl 2004; Blumenthal et al. 1998; BHC 1992).
- ▶ Used in Herbal Medicine to help increase bile flow (cholagogue and choleric) (WHO 2007; Wichtl 2004; Blumenthal et al. 1998; BHC 1992).
- ▶ (Traditionally) used in Herbal Medicine to help stimulate appetite (EMA 2009; WHO 2007; Wichtl 2004; Blumenthal et al. 1998; BHC 1992).
- ▶ (Traditionally) used in Herbal Medicine to help treat digestive upset (dyspepsia) (EMA 2009; WHO 2007; Wichtl 2004; Blumenthal et al. 1998; BHC 1992).
- ▶ Traditionally used in Herbal Medicine to increase the amount of urine to achieve flushing of the urinary tract as an adjuvant in minor urinary complaints (EMA 2009).

The following combined use(s) or purpose(s) is/are also acceptable:

- ▶ Used in Herbal Medicine as a diuretic to achieve flushing of the urinary tract as an adjuvant in minor urinary complaints (EMA 2009; WHO 2007; Wichtl 2004; Blumenthal et al. 1998; BHC 1992).
- ▶ Used in Herbal Medicine to help stimulate appetite, increase bile flow (cholagogue and choleric) and treat digestive upset (dyspepsia) (EMA 2009; WHO 2007; Wichtl 2004; Blumenthal et al. 1998; BHC 1992).

Note

Claims for traditional use must include the term “Herbal Medicine”, “Traditional Chinese Medicine”, or “Ayurveda”.

Dose(s)

Subpopulation(s)

Adolescents 12 to 17 years and Adults 18 years and older

Quantity(ies)

Methods of preparation: Dry, Powder, Non-Standardised Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)



LEAF

1.2-30 grams of dried leaf, per day (Mills and Bone 2005; Hoffmann 2003; Blumenthal et al. 2000, 1998; BHC 1992; BHP 1983)

ROOT

1.5-24 grams of dried root, per day (Mills and Bone 2005; Hoffmann 2003; BHC 1992; BHP 1983)

WHOLE PLANT

3-30 grams of dried whole plant, per day (EMA 2009; WHO 2007; Wichtl 2004; Blumenthal et al. 2000, 1998).

Direction(s) for use

Flushing of urinary tract

To ensure an increase of the amount of urine, adequate fluid intake is required during treatment (EMA 2009).

Duration(s) of use

Diuretic

For occasional use only (APhA 2002; CPhA 2002).

Flushing of urinary tract, Indigestion, and Loss of appetite

Consult a health care practitioner/health care provider/health care professional/doctor/physician if symptoms persist beyond 2 weeks (EMA 2009).

Risk information

Caution(s) and warning(s)

All products



Consult a health care practitioner/health care provider/health care professional/doctor/physician prior to use if you have liver or gall bladder diseases, and/or intestinal obstruction (Brinker 2010; Godfrey et al. 2010; ESCOP 2003; BHC 1992).

Constipation, Flushing of the urinary tract, Indigestion, and Loss of appetite

Consult a health care practitioner/health care provider/health care professional/doctor/physician if symptoms persist or worsen.

Contraindication(s)

Products providing 10 g or more of dried leaf and/or dried root and/or dried whole plant per day

Do not use this product if you have heart disease, high or low blood pressure, kidney or liver disorder, diabetes or edema (swelling of hands, face and feet) or are taking products containing diuretics (Goksu et al. 2010; EMA 2009; Hunt et al. 2005; Green et al. 2002; Mujais and Katz 2000; Carlsen et al. 1990; Kuller et al. 1986; Artz et al. 1966).

Known adverse reaction(s)

No statement required.

Non-medicinal ingredients

Must be chosen from the current Natural Health Products Ingredients Database (NHPID) and must meet the limitations outlined in the database.

Storage conditions

No statement required.

Specifications

- ▶ The finished product specifications must be established in accordance with the requirements described in the Natural and Non-prescription Health Products Directorate (NNHPD) Quality of Natural Health Products Guide.
- ▶ The medicinal ingredient must comply with the requirements outlined in the NHPID.



References cited

APhA 2002: Berardi RR, DeSimone EM, Newton GD, Oszko MA, Popovich NG, Rollins CJ, Shimp LA, Tietze KJ, editors. Handbook of Nonprescription Drugs: An Interactive Approach to Self-Care. 13th edition. Washington (DC): American Pharmaceutical Association; 2002.

Artz SA, Paes IC, Faloon WW. Hypokalemia-induced hepatic coma in cirrhosis. Occurrence despite neomycin therapy. Gastroenterology 1966;51(6):1046-1053.

BHC 1992: Bradley PR, editor. British Herbal Compendium: A Handbook of Scientific Information on Widely Used Plant Drugs, Volume 1. Bournemouth (GB): British Herbal Medicine Association; 1992.

BHP 1996: British Herbal Pharmacopoeia. Bournemouth (GB): The British Herbal Medicine Association; 1996.

BHP 1983: British Herbal Pharmacopoeia. Bournemouth (GB): British Herbal Medicine Association; 1983.

Blumenthal M, editor. The Complete German Commission E Monographs: Therapeutic Guide to Herbal Medicines. Austin (TX): American Botanical Council in cooperation with Integrative Medicine Communications; 1998.

Blumenthal M, Goldberg A, Brinckmann J, editors. Herbal Medicine: Expanded Commission E Monographs. Boston (MA): Integrative Medicine Communications; 2000.

Brinker F. Herb Contraindications and Drug Interactions, 4th edition. Sandy (OR): Eclectic Medical Publications; 2010.

Carlsen JE, Køber L, Torp-Pedersen C, Johansen P. Relation between dose of bendrofluazide, antihypertensive effect, and adverse biochemical effects. British Medical Journal 1990;300(6730):975-978.

CPhA 2002: Canadian Pharmacists Association. Patient Self-Care. Helping Patients Make Therapeutic Choices. Ottawa (ON): Canadian Pharmacists Association; 2002.

Ellingwood F. American Materia Medica, Therapeutics and Pharmacognosy. Sandy (OR): Eclectic Medical Publications; 1983 [Reprint of 1919 original].

EMA 2009: European Medicines Agency, Science Medicines Health. 12 November 2009. EMA/HMPC/212895/2008. Committee on Herbal Medicinal Products (HMPC) Community herbal monograph on *Taraxacum officinale* Weber ex Wigg., radix cum herba.

Final. [Accessed 2018 August 9]. Available from:
http://www.ema.europa.eu/docs/en_GB/document_library/Herbal_-_HMPC_assessment_report/2011/03/WC500102972.pdf

ESCOP 2003: ESCOP Monographs: The Scientific Foundation for Herbal Medicinal Products. 2nd edition. Exeter (GB): European Scientific Cooperative on Phytotherapy and Thieme; 2003.

Felter HW, Lloyd JU. King's American Dispensatory, Volume 2, 18th edition. Sandy (OR): Eclectic Medical Publications; 1983 [Reprint of 1898 original].

Godfrey A, Saunders P, Barlow K, Gowan M. Principles and Practices of Naturopathic Botanical Medicine: Volume 1: Botanical Medicine Monographs, 1st edition. Toronto (ON): CCM Press Inc.; 2010.

Goksu E, Eken C, Karadeniz O, Kucukyilmaz O, Firt report of hypoglycemia secondary to dandelion (*Taraxacum officinale*) ingestion. The American Journal of Emergency Medicine 2010;28:111.e1-111.e2

Green DM, Ropper AH, Kronmal RA, Psaty BM, Burke GL. Serum potassium level and dietary potassium intake as risk factors for stroke. Neurology 2002;59(3):314-320.

Grieve M. A Modern Herbal, Volume 1. New York (NY): Dover Publications; 1971 [Reprint of 1931 Harcourt, Brace & Company publication].

Hoffmann D. Medical Herbalism: The Science and Practice of Herbal Medicine. Rochester (VT): Healing Arts Press; 2003.

Hunt SA, Abraham WT, Chin MH, Feldman AM, Francis GS, Ganiats TG, Jessup M, Konstam MA, Mancini DM, Michl K, Oates JA, Rahko PS, Silver MA, Stevenson LW, Yancy CW, Antman EM, Smith Jr. SC, Adams CD, Anderson JL, Faxon DP, Fuster V, Halperin JL, Hiratzka LF, Jacobs AK, Nishimura R, Ornato JP, Page RL, Riegel B. American College of Cardiology, American Heart Association Task Force on Practice Guidelines, American College of Chest Physicians, International Society for Heart and Lung Transplantation, Heart Rhythm Society. ACC/AHA 2005 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Committee to Update the 2001 Guidelines for the Evaluation and Management of Heart Failure): developed in collaboration with the American College of Chest Physicians and the International Society for Heart and Lung Transplantation: endorsed by the Heart Rhythm Society. Circulation 2005;112(12):e154-235.

Kuller LH, Hulley SB, Cohen JD, Neaton J. Unexpected effects of treating hypertension in men with electrocardiographic abnormalities: a critical analysis. Circulation 1986;73(1):114-123.

McGuffin M, Kartesz JT, Leung AY, Tucker AO, editors. Herbs of Commerce. 2nd edition. Silver Spring (MD): American Herbal Products Association; 2000.

Mills S, Bone K. The Essential Guide to Herbal Safety. St. Louis (MO): Elsevier Churchill Livingstone; 2005.

Mujais SK, Katz AL. Potassium deficiency. In: Seldin & Giebisch's The Kidney: Physiology and Pathophysiology. Lippincott Williams and Wilkins; 2000. p1615.

USDA 2018: United States Department of Agriculture, Agricultural Research Service, National Genetic Resources Program. Germplasm Resources Information Network (GRIN).. National Germplasm Resources Laboratory, Beltsville (MD). [*Taraxacum officinale* F.H. Wigg: Last updated: 23-May-2012; Accessed 2018 August 9]. Available from: http://www.ars-grin.gov/cgi-bin/npgs/html/tax_search.pl

WHO 2007: World Health Organization. WHO Monographs on Selected Medicinal Plants, Volume 3. Geneva (CH): World Health Organization; 2007.

Wichtl M, editor. Herbal Drugs and Phytopharmaceuticals: A Handbook for Practice on a Scientific Basis. 3rd edition. Stuttgart (DE): Medpharm Scientific Publishers; 2004.

Wiersema J, León B. World Economic Plants: A Standard Reference. Boca Raton (FL): CRC Press LLC; 1999.

Wren RC. Potter's Cyclopeda of Botanical Drugs and Preparations. London (GB): Potter and Clark; 1907.

References reviewed

Barnes J, Anderson LA, Philipson JD. Herbal Medicines. 3rd edition. London (GB): The Pharmaceutical Press; 2007.

Barnes J, Anderson LA, Philipson JD. Herbal Medicines: A Guide for Healthcare Professionals, 2nd edition. London (GB): The Pharmaceutical Press; 2002.

Bisset NG, Wichtl M, editors. Herbal Drugs and Phytopharmaceuticals: A Handbook for Practice on a Scientific Basis, 2nd edition. Stuttgart (D): Medpharm GmbH Scientific Publishers; 2001.

Brinker 2010: Brinker F. Final updates and additions for Herb Contraindications and Drug Interactions, 3rd edition, including extensive Appendices addressing common problematic conditions, medications and nutritional supplements, and influences on Phase I, II & III metabolism with new appendix on botanicals as complementary adjuncts with drugs. [Internet].



Sandy (OR): Eclectic Medical Publications. [Updated July 13, 2010; Accessed 2012 October 17]. Available from: <http://www.eclecticherb.com/emp/updatesHCDCI.html>

Clare BA, Conroy RS, Spelman K. The Diuretic Effect in Human Subjects of an Extract of *Taraxacum officinale* Folium over a Single Day. *The Journal of Alternative and Complementary Medicine* 2009;15(8):929-934.

Felter HW. *The Eclectic Materia Medica, Pharmacology and Therapeutics*. Sandy (OR): Eclectic Medical Publications; 1983 [Reprint of 1922 original].

Schütz K, Carle R, Schieber A. *Taraxacum* – A review on its phytochemical and pharmacological profile. *Journal of Ethnopharmacology* 2006;107:313-323.

Swanston-Flatt SK, Day C, Flatt PR, Gould BJ, Baily CJ. Glycaemic effects of traditional European plant treatments for diabetes. *Studies in normal and streptozotocin diabetic mice*. *Diabetes Research* 1989;10(2):69-73.

Williamson EM, Evans FJ, Wren RC. *Potter's New Cyclopaedia of Botanical Drugs and Preparations*. Saffron Walden (GB): C.W. Daniel Company Limited; 1988.