



NATURAL HEALTH PRODUCT

ECHINACEA PURPUREA

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 are synonyms or that the statements are synonymous. Either term or statement may be selected by the applicant.

Date

July 10, 2013

Proper name(s)

Echinacea purpurea L. Moench (Asteraceae) (USDA 2012)

Common name(s)

- ▶ Echinacea (Blumenthal et al. 2000; McGuffin et al. 1997)
- ▶ Purple coneflower (McGuffin et al. 2000)

Source material(s)

Aerial parts and/or root (Barnes et al. 2007; ESCOP 2003)

Route(s) of administration

Oral

Dosage form(s)

- ▶ The acceptable pharmaceutical dosage forms include, but are not limited to chewables (e.g. gummies, tablets), caplets, capsules, strips, lozenges, powders or liquids where the dose is measured in drops, teaspoons or tablespoons.
- ▶ This monograph is not intended to include foods or food-like dosage forms such as bars, chewing gums or beverages.

Use(s) or Purpose(s) Statement(s) to the effect of

- ▶ Traditionally used in Herbal Medicine to help relieve cold symptoms (Moerman 1998; Grieve 1971; Remington and Wood 1918).
- ▶ (Traditionally) used in Herbal Medicine to help fight off infections, especially of the upper respiratory tract (Hoffmann 2003; Mills and Bone 2000; Grieve 1971; Remington and Wood 1918).
- ▶ Supportive therapy in the treatment of upper respiratory tract infections (p.ex. common colds) (Goel et al. 2004; Schulten et al. 2001; Brinkeborn et al. 1999; Hoheisel et al. 1997; Bräunig et al. 1992).
- ▶ Helps to relieve the symptoms (Goel et al. 2004; Schulten et al. 2001; Brinkeborn et al. 1999; Hoheisel et al. 1997; Bräunig et al. 1992) and shorten the duration (Goel et al. 2004; Schulten et al. 2001; Hoheisel et al. 1997; Bräunig et al. 1992) of upper respiratory tract infections.

Note

A claim for traditional use must include the term “Herbal Medicine”.

Dose(s)

Table 1 Dose information expressed as “quantity dried equivalent” of *Echinacea purpurea* aerial parts presented as dose per day

| Subpopulation | | Quantity dried equivalent (aerial parts) (g/day) | |
|---|---------|--|---------|
| | | Minimum | Maximum |
| Children ¹ | 2-4 y | 0.4 | 1.0 |
| Children and adolescents ¹ | 5-9 y | 0.6 | 1.5 |
| Adolescents ¹ | 10-14 y | 1.3 | 3.0 |
| Adolescents and adults ^{1,2,3} | ≥ 14 y | 2.5 | 6.0 |

¹ Children and adolescent doses were calculated as a proportion of the adult dose (JC 2012). The use of *Echinacea purpurea* aerial parts in children is supported by the following references: McIntyre 2005; Bove 2001; Schilcher 1997.

² Adult dose supported by the following reference: Mills and Bone 2000

³ Includes pregnant and breastfeeding women

Table 2 Dose information for the pressed juice of *Echinacea purpurea* aerial parts presented as dose per day

| Subpopulation | | Pressed juice (aerial parts) (ml/day) | |
|---|---------|---------------------------------------|---------|
| | | Minimum | Maximum |
| Children ¹ | 2-4 y | 0.7 | 1.7 |
| Children and adolescents ¹ | 5-9 y | 1.0 | 2.5 |
| Adolescents ¹ | 10-14 y | 2.0 | 5.0 |
| Adolescents and adults ^{1,2,3} | ≥ 14 y | 3.9 | 10.0 |

¹ Children and adolescent doses were calculated as a proportion of the adult dose (JC 2012). The use of *Echinacea purpurea* aerial parts in children is supported by the following references: McIntyre 2005; Bove 2001; Schilcher 1997.



² Adult dose supported by the following references: Schulten et al. 2001; Hoheisel et al. 1997
³ Includes pregnant and breastfeeding women

Table 3 Dose information expressed as “quantity dried equivalent” of *Echinacea purpurea* root presented as dose per day

| Subpopulation | | Quantity dried equivalent (root) (g/day) | |
|---|---------|--|---------|
| | | Minimum | Minimum |
| Children ¹ | 2-4 y | 0.15 | 0.8 |
| Children and adolescents ¹ | 5-9 y | 0.23 | 1.1 |
| Adolescents ¹ | 10-14 y | 0.45 | 2.3 |
| Adolescents and adults ^{1,2,3} | ≥ 14 y | 0.90 | 4.5 |

¹ Children and adolescent doses were calculated as a proportion of the adult dose (JC 2012). The use of *Echinacea purpurea* root in children is supported by the following references: McIntyre 2005; Bove 2001; Schilcher 1997

² Adult dose supported by the following references: Mills and Bone 2000; Bräunig et al. 1992
³ Includes pregnant and breastfeeding women

Table 4 Dose information expressed as “quantity dried equivalent” of *Echinacea purpurea* preparations containing both aerial parts and root presented as dose per day

| Subpopulation | | Quantity dried equivalent (aerial parts and root) (g/day) | |
|---|---------|---|---------|
| | | Minimum | Maximum |
| Children ¹ | 2-4 y | 0.5 | 0.9 |
| Children and adolescents ¹ | 5-9 y | 0.8 | 1.4 |
| Adolescents ¹ | 10-14 y | 1.5 | 2.8 |
| Adolescents and adults ^{1,2,3} | ≥ 14 y | 3.0 | 5.5 |

¹ Children and adolescent doses were calculated as a proportion of the adult dose (JC 2012). The use of *Echinacea purpurea* in children is supported by the following references: McIntyre 2005; Bove 2001; Schilcher 1997

² Adult dose supported by the following reference: Mills and Bone 2000
³ Includes pregnant and breastfeeding women

Directions for use

Take at the first sign of infection (Goel et al. 2004; Schulten et al. 2001; Brinkeborn et al. 1999; Hoheisel et al. 1997).

Note

Refer to Appendix 1 for examples of dosage preparations and directions for use, according to cited references. The purpose of Appendix 1 is to provide guidance to industry.

Duration of use

For use beyond 8 weeks, consult a health care practitioner (ESCOP 2003; Blumenthal et al. 2000).

Risk information

Statement(s) to the effect of



Caution(s) and warning(s)

- ▶ If symptoms persist or worsen, consult a health care practitioner.
- ▶ If you have a progressive systemic disease such as tuberculosis, collagenosis, multiple sclerosis, AIDS, or HIV infection, consult a health care practitioner prior to use (Brinker 2010; Brinker 2001; McGuffin et al. 1997).
- ▶ If you have an auto-immune disorder, consult a health care practitioner prior to use (Brinker 2010; McGuffin et al. 1997).
- ▶ If you are taking immunosuppressants, consult a health care practitioner prior to use (Brinker 2010; Mills and Bone 2005).

Contraindication(s)

No statement required.

Known adverse reaction(s)

Preparations containing aerial parts:

Rare cases of severe allergic reactions have been known to occur; use caution if you are allergic to plants of the Daisy family. (MHRA 2012; EMA 2010; Kligler 2003; WHO 1999).

Non-medicinal ingredients

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

Specifications

- ▶ The finished product specifications must be established in accordance with the requirements described in the NHPD *Quality of Natural Health Products Guide*.
- ▶ The medicinal ingredient must comply with the requirements outlined in the *Natural Health Products Ingredients Database* (NHPID). In addition, the medicinal ingredient may comply with the specifications outlined in the pharmacopoeial monographs listed in Table 5 below.

Table 5 *Echinacea purpurea* monographs published in the European (Ph.Eur.) and United States (USP) Pharmacopoeias

| Pharmacopoeia | Monograph |
|---------------|--|
| Ph.Eur. | Purple Coneflower Herb Purple Coneflower Root |
| USP | <i>Echinacea purpurea</i> Aerial Parts <i>Echinacea purpurea</i> Root Powdered <i>Echinacea purpurea</i> Powdered <i>Echinacea purpurea</i> Extract |



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Appendix 1 Examples of appropriate dosage preparations, frequencies of use and directions for use (for adults only)

Aerial parts

Dried aerial parts

2.5-6 g, per day (Mills and Bone 2000)

Pressed juice

- ▶ 5 ml, 2 times per day
(22% alcohol) (Schulten et al. 2001)
- ▶ 1.3 ml (20 drops), per dose
(22% alcohol) (Hoheisel et al. 1997)

Direction for use:

Take each dose in a half glass of water every two hours for the first day, followed by three times per day until symptoms disappear [not to exceed 10 ml, per day] (Hoheisel et al. 1997).

Root

Dried root:

1.5-4.5 g, per day (Mills and Bone 2000)

Tincture:

- ▶ 1.5-4.5 g dried equivalent, per day
(1:2, 3-9 ml) (Mills and Bone 2000)
- ▶ 1.5-4.5 g dried equivalent, per day
(1:5, 7.5-22.5 ml) (Mills and Bone 2000)
- ▶ 0.9 g dried equivalent, per day
(1:5, 55% ethanol) (Bräunig et al. 1992)

Preparations containing aerial parts and root

Fluidextract:

3-5.5 g dried equivalent, per day
(1:1, 3-5.5 ml) (Mills and Bone 2000)