

TOX/2025/45 Appendix A &B

Appendix A

Search methodology

1. The following electronic databases were searched for relevant articles published between 2014 and 2024: LitFetch (which includes material from PubMed, Scopus, Ebsco (Food Science Source) and Springer), Google and Google Scholar. The searches were conducted on various dates between 13th May 2024 and 24th May 2024.
2. The search terms used included ‘echinacea’ AND: (‘pregnan*’ OR ‘maternal*’ OR ‘reproduction’ OR ‘gestation’ OR ‘lactation’ OR ‘preconception’ OR ‘development’ OR ‘tox*’ OR ‘safety’ OR ‘uses’ OR ‘consumption’ OR ‘indication’ OR ‘interaction’).
3. The references from extracted papers were searched for citations not captured in the literature search. Only articles published in English were included, due to the linguistic abilities of the reviewer.
4. The UKTIS was also asked for information on any enquiries relating to maternal echinacea use and any reports of adverse effects in pregnant women or their newborn infants received from 1983 to June 2024. This included information relating to the type, dosage, duration, and timing of echinacea taken and any pregnancy outcomes captured through follow-up.

Appendix B

Table 7: Food products containing Echinacea.

Product name	Type	<i>Echinacea</i> species and plant part	Composition	Directions for use	Daily dose of <i>Echinacea</i> (mg)	Additional information/ warnings
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Pukka Herbs Elderberry and Echinacea Organic Herbal Tea	Tea bags.	<i>Echinacea</i> (species not specified) herb.	Ginger root, liquorice root, <i>Echinacea</i> herb (11%), beetroot, aniseed, rosehip, peppermint leaf, orange peel, elderflower (5%), elderberry (4%), hibiscus, orange essential oil flavour, blackcurrant flavour.	Not specified.	Not specified.	NA
Yogi Tea Echinacea Special Formula	Tea bags.	Not specified.	Cinnamon, <i>Echinacea</i>, ginger, fennel, rooibos, roasted chicory, carob, cardamom, basil, burdock root, black pepper, turmeric root, astragalus, vanilla beans.	Pour 250 ml of freshly boiled water over the teabag. Allow to infuse for 5 to 6 minutes - or longer for a stronger flavour.	Not specified.	NA

Yogi Tea, Echinacea Immune Support, Caffeine Free, 16 Tea Bags, 0.85 oz (24 g)	Tea bags.	<i>Echinacea purpurea</i> Plant part not specified.	Each tea bag contains: 144 mg <i>Echinacea purpurea</i> , 47 mg <i>Echinacea purpurea</i> extract , 1,245 mg herb blend (rose hips, dried acerola juice, basil, cinnamon, ginger, cardamom, elderberries, black pepper, moringa, hibiscus, cocoa shells, liquorice, fennel).	Bring water to boiling and steep 7 minutes. For a stronger tea, use 2 tea bags. Drink 3-4 cups daily.	432 - 1,152 mg <i>Echinacea purpurea</i> and 141 - 376 mg <i>Echinacea purpurea</i> extract.	Consult your healthcare pro prior to use if pregnant or nu taking any medication or have a medica condition.
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<p>Traditional Medicinals, Organic Echinacea Plus, Elderberry, Caffeine Free, 16 Wrapped Tea Bags, 0.85 oz (24 g)</p>	<p>Tea bags.</p>	<p><i>Echinacea purpurea</i> herb.</p>	<p>Each tea bag contains: 1005 mg <i>Echinacea purpurea</i> herb, 127.5 mg European elder flower, 1,245 mg herb blend (ginger rhizome, chamomile flower, yarrow flower, peppermint leaf, Echinacea purpurea root dry extract (2-8:1), European elder fruit dry concentrate).</p>	<p>Pour 8 oz (~227 mL) freshly boiled water over 1 tea bag. Cover & Steep for 10-15 min. Enjoy 5-6 cups throughout the day.</p>	<p>5,025 - 6,030 mg <i>Echinacea purpurea</i> herb.</p>	<p>Do not use if you are pregnant or breastfeeding. Always consult your healthcare practitioner. Not recommended for children under 12 years of age.</p>
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<p>Traditional Medicinals, Organic Immune Zoom®, Lemon Ginger Echinacea, Caffeine Free, 16 Wrapped Tea Bags, 1.13 oz (32 g)</p>	<p>Tea bags.</p>	<p><i>Echinacea purpurea</i> root</p>	<p>2,000 mg herb blend (ginger rhizome, Echinacea purpurea herb, lemon myrtle leaf (<i>Backhousia citriodora</i>), lemon peel, liquorice root, peppermint leaf, Echinacea purpurea root dry extract (2-8:1), cardamom seed, Organic liquorice root dry extract (6:1).</p>	<p>Pour 8 oz (~227 mL) freshly boiled water over 1 tea bag. Cover & Steep for 10-15 min. Enjoy 2 cups throughout the day.</p>	<p>Not specified.</p>	<p>Consult your healthcare practitioner prior to use if you are pregnant or breastfeeding, you have an autoimmune or immune system disorder, or if taking immunosuppressants or if you have gallbladder disease. Not recommended for use with children under 12 years of age.</p>
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Superblends Defence 20 Tea Bags	Tea bags.	<i>Echinacea</i> (species not specified) root.	Green tea (26%), Ginger root (15%), White hibiscus, Cinnamon bark, Natural lemon Flavouring with other Natural Flavourings (10%), <i>Echinacea</i> root (9%), Lemon peel (5%), Natural flavouring, Natural lime flavouring (4%), vitamin C (2%).	At least 1 cup a day.	Not specified.	NA
Frontier Co- op, Organic Cut & Sifted <i>Echinacea</i> <i>Angustifolia</i> Root	Loose herb for tea.	<i>Echinacea</i> <i>angustifolia</i> root.	Half a teaspoon contains 1.1 g cut root.	To prepare as tea, pour 8 oz. (~227 mL) boiling water over 1/2 teaspoon of root. Cover and steep 20-30 minutes, strain and serve immediately.	Not specified.	If pregnant, nu suffering from medical conditi taking medica consult a heal practitioner be use.

Frontier Co-op, Organic Elderberry Echinacea Wellness Tea, 16 oz	Loose herb for tea.	<i>Echinacea purpurea</i> herb and root.	Elderberry, <i>Echinacea purpurea</i> herb, peppermint, yarrow, ginger, chamomile flower, <i>Echinacea purpurea</i> root.	Pour 8 oz. (227 mL) boiling water over 1 tablespoon of tea. Cover and steep 10-15 minutes, strain and serve immediately.	Not specified.	If pregnant, nursing, or suffering from a medical condition, consult a healthcare practitioner before use.
Frontier Co-op, Cut & Sifted Echinacea Purpurea Herb	Loose herb for tea.	<i>Echinacea purpurea</i> herb.	One teaspoon contains 820 mg <i>Echinacea purpurea</i> cut herb.	To prepare as a tea, pour 8 oz. (~227 mL) boiling water over 1 teaspoon of herb. Cover and steep 3-5 minutes, strain and serve immediately.	Not specified.	NA
Lemon & Ginger Vitamin Honey	Honey	Not specified.	1 teaspoon (7g) contains: 15 mg <i>Echinacea</i> , 3 mcg vitamin D3, 10mg vitamin C, 0.4 mcg vitamin B6, 0.4 mcg vitamin B12.	2 teaspoons into warm water.	Not specified.	This product is suitable for pregnant women, however, we'd always recommend that you consult with a professional if you are unsure before making a purchase.

Orange Vitamin Honey	Honey	Not specified.	1 teaspoon contains: 15 mg <i>Echinacea</i>, 3 mcg vitamin D3, 10mg vitamin C, 0.4 mcg vitamin B6, 0.4 mcg vitamin B12.	2 teaspoons into warm water.	Not specified.	This product is suitable for pre or breastfeeding women, however we'd always recommend that you consult with a professional if you are unsure before making a purchase.
Wedderspoon Natural Manuka Honey and Ginger with Echinacea Drops (20 Drops per box)	Honey	Not specified.	Organic cane sugar, organic manuka honey (15.5%), organic brown rice syrup, ground ginger (0.6%), <i>Echinacea</i> (0.04%).	Not specified.	Not specified.	NA

A.Vogel Echinacea Lozenges Extract of Freshly Harvested Echinacea Blend of Other Herbs Suitable for Vegetarians 30g	<i>Echinacea purpurea</i> Lozenges herb and root extract.	Each lozenge (2.2 g) contains: Glucose syrup, raw cane sugar, honey, herb extracts, fresh <i>Echinacea purpurea</i> extract (0.62%) , natural flavours, caramel colour, menthol, peppermint essential oil, citric acid.	As required.	Not specified.	NA
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Honey Lemon Echinacea Soothe & Clear Drops 75g (Ricola)	Lozenges specified)	<i>Echinacea</i> (species not dry pressed juice.	Sugar, glucose syrup, Fair Trade honey (5.1%), extract (0.5%) of Ricola's herb mixture, vitamin C, lemon juice concentrate, acid (citric acid, malic acid), natural flavourings, natural <i>Echinacea</i> aroma (<i>Echinacea</i> dry pressed juice) , mint oil, peppermint oil, menthol.	As required.	Not specified.	NA
Swanson, Zinc & C with Elderberry & Echinacea, Orange & Lemon, 60 Lozenges	Lozenges	<i>Echinacea purpurea</i> herb (aerial parts) powder.	Each lozenge contains: 100 mg vitamin C, 25 mg zinc, 20 mg <i>Echinacea purpurea</i> powder , 20 mg elderberry extract.	As a dietary supplement, dissolve one lozenge in the mouth two times per day.	40 mg <i>Echinacea purpurea</i> powdered herb.	NA

Table 8: Echinacea food supplements (solid dosage forms).

Product name	Dosage form	<i>Echinacea</i> species and plant part	Composition	Directions for use	Daily dose <i>Echinacea</i> (mg)	Additional information
NOW Foods Echinacea 400 mg 100 Veg Capsules	Capsules	<i>Echinacea purpurea</i> root.	400 mg root.	Take 2 capsules 1 to 4 times daily as needed. Continuous high level consumption of this product for more than 2 weeks of each month is not recommended.	800 - 3,200 mg root.	For adults only. Consult physician if pregnant/nursing or taking medication. Have a medical condition.
Grape Tree Echinacea Root 500mg	Tablets	<i>Echinacea</i> (species not specified) root.	500 mg root.	1 tablet daily.	500 mg root.	Linked to many health benefits including reduced inflammation, improved immunity and lower blood sugar levels.

For adults
Do not take
product if y
pregnant o
nursing. Co
your health
provider be
using this o
product if y
taking
medication
have a me
condition,
especially
autoimmun
condition.

If you are
pregnant,
nursing, ta
any medica
or have an
medical
conditions,
consult you
doctor befo
use.

Swanson
Echinacea,
400mg
herbal
supplement

Capsules

*Echinacea
purpurea*
herb (aerial
parts).

400 mg herb.

1 capsule up
to 3 times per
day. Limit use
to eight
consecutive
weeks. Use
periodically for
a few weeks at
a time (for
maintenance
purposes).

400-1,200
mg herb.

Echinacea,
1300 mg
(per
serving),
180
Vegetarian
Capsules

Capsules

*Echinacea
purpurea*
herb (aerial
parts).

65 mg herb
extract (DER
10:1)
equivalent to
650 mg herb.

Take 2
vegetarian
capsules per
day preferably
with a meal.

130 mg
herb
extract
equivalent
to 1,300 mg
herb.

Life Extension, Echinacea Elite, 60 Vegetarian Capsules	Capsules	<i>Echinacea purpurea</i> herb and <i>Echinacea angustifolia</i> root.	<i>Echinacea purpurea</i> (aerial parts) extract 125 mg	Take 1 capsule twice daily.	250 mg <i>Echinacea purpurea</i> (aerial parts) extract and 250 mg <i>Echinacea angustifolia</i> (root) extract.	Consult with physician if you are undergoing treatment or if you are pregnant or lactating.
			[standardised to 4% phenolic compounds]. <i>Echinacea angustifolia</i> (root) extract 125 mg [standardised to 4% echinacosides].			
Specialist Herbal Supplies (SHS) Echinacea Capsules	Capsules	<i>Echinacea angustifolia</i> .	325 mg. Preparation not specified.	1 capsule, 3 times a day, taken with food or a drink. If desired, up to four times this amount can safely be taken.	975-1,300 mg <i>Echinacea angustifolia</i> .	If you are pregnant, lactating, breastfeeding, have a medical condition or are under medical supervision, please consult your doctor before use.
Nuke Nutrition Echinacea Tablets High Strength x180 - Immune Support Echinacea Herbal Supplements	Tablets	<i>Echinacea</i> Species and part of plant not specified.	200 mg extract (DER 10:1) equivalent to 2,000 mg <i>Echinacea</i> .	Take 1 tablet with your first meal of the day.	200 mg extract equivalent to 2,000 mg <i>Echinacea</i> .	Consult your physician if you are taking medication or under medical supervision. If you are pregnant and breastfeeding,

Echinacea Extract Capsules 3500mg (High Strength) Echinacea purpurea	<i>Echinacea purpurea</i> . Capsules Plant part not specified.	350 mg extract (DER 10:1) equivalent to 3,500 mg <i>Echinacea purpurea</i> .	Take 1 capsule per day with water.	350 mg extract equivalent to 3,500 mg <i>Echinacea purpurea</i> .	NA
Nature's Way, Echinacea Goldenseal, 450 mg, 100 Vegan Capsules	<i>Echinacea purpurea</i> herb (aerial parts) and <i>Echinacea angustifolia</i> root.	450 mg <i>Echinacea</i> 7 Herb Blend: <i>Echinacea purpurea</i> (stem, leaf, flower) , Goldenseal (root), <i>Echinacea angustifolia</i> (root) , Burdock (root), Gentian (root), Cayenne Pepper (fruit), Wood Betony (stem, leaf, flower)	Take 2 capsules twice daily, preferably with food.	1,800 mg <i>Echinacea</i> 7 herb blend. Exact dose of <i>Echinacea</i> cannot be determined.	Do not use if you are pregnant or nursing, have a stomach or duodenal ulcer, stomach irritation or inflammation. Not recommended for individuals with autoimmune conditions. If you have diabetes or are taking medication, consult a healthcare professional before use.

Nature's
Way,
Echinacea
Purpurea
Herb, 1,200
mg, 180
Vegan
Capsules
(400 mg per
Capsule)

Capsules

*Echinacea
purpurea*
herb (aerial
parts).

400 mg herb.

Adults take 3
capsules three
times daily,
preferably
with food. Only
take this
supplement if
they are
suffering
severe illness
to stimulate
the immune
system and to
not take for
longer than 5
days.

3,600 mg
herb.

If pregnant
nursing, or
any medical
condition, consult a
healthcare
professional
before use.

California
Gold
Nutrition,
EuroHerbs,
Echinacea
Herb
Extract,
Euromed
Quality, 80
mg, 180
Veggie
Capsules

Capsules

*Echinacea
purpurea*
herb (aerial
parts).

80 mg
*Echinacea
purpurea*
(aerial parts)
extract (DER
5:1) equivalent
to 400 mg
dried herb.

Take 1 capsule
daily, with
food.

80 mg
extract
equivalent
to 400 mg
dried herb.

Pregnant or
lactating women
should consult
with a physician,
pharmacist,
naturopath,
or other qualified
healthcare
professional
before taking this
supplement.

21st Century, Echinacea Complex, 250 mg, 60 Vegetarian Capsules (125 mg per Capsule)	Capsules	<i>Echinacea purpurea</i> herb and <i>Echinacea angustifolia</i> root.	125 mg <i>Echinacea</i> blend (<i>Echinacea purpurea</i> herb extract and <i>Echinacea angustifolia</i> root powder)	Adults take two (2) capsules daily with any meal or as directed by a healthcare provider.	250 mg <i>Echinacea</i> blend (<i>Echinacea purpurea</i> herb extract & <i>Echinacea angustifolia</i> root powder)	Consult a healthcare provider prior to use if pregnant, nursing, or taking medication. Have a medical condition or are planning a medical procedure.
Sundown Naturals, Whole Herb Echinacea, 400 mg, capsules	Capsules	<i>Echinacea purpurea</i> herb (aerial parts).	400 mg <i>Echinacea purpurea</i> herb.	Take (1) capsule seven times daily, preferably with meals. Capsules may be opened and prepared as a tea.	2,800 mg herb.	If you are pregnant, nursing, taking any medication, or have any medical condition, consult your doctor before.

Gaia Herbs, Echinacea Goldenseal, 60 Vegan Liquid Phyto- Caps	Capsules	<i>Echinacea purpurea</i> root, aerial parts and seed and <i>Echinacea angustifolia</i> root.	800 mg Proprietary Extract Blend: <i>Echinacea purpurea</i> root, Goldenseal (<i>Hydrastis canadensis</i>) root, <i>Echinacea angustifolia</i> root, <i>Echinacea purpurea</i> seed , St. John's Wort (<i>Hypericum perforatum</i>) aerial parts, <i>Echinacea purpurea</i> aerial parts	Adults take 2 capsules 3 times daily between meals.	4,800 mg Proprietary Extract Blend. Exact dose of <i>Echinacea</i> cannot be determined.	Not for use during preg or lactation
Specialist Herbal Supplies (Shs) Echinacea Compound	Capsules	<i>Echinacea angustifolia</i>	<i>Echinacea angustifolia</i> 92mg, Garlic 92mg, Myrrh 92mg, Wild Indigo 46mg. <i>Echinacea</i> preparation not specified.	1 capsule, 3 times a day, taken with food or a drink.	276 mg <i>Echinacea angustifolia</i> .	Do not take alongside b thinning dr such as wa Not to be u pregnancy breastfeed for children under 12 y old.

Table 9: *Echinacea* food supplements (oral liquids)

Product name	Dosage form	<i>Echinacea</i> species and plant part	Composition	Directions for use	Daily dose <i>Echinacea</i> (mg)	Additional information
Nature's Way, Echinacea, 500 mg, 1 fl oz (30 mL)	Oral solution.	<i>Echinacea purpurea</i> herb (aerial parts).	250 mg herb extract per 1 mL.	Adults: Take 2 mL 3 times daily. Children ages 6-12 years of age: Take 1 mL 3 times daily. Intensive: Take 2 mL every 2 hours for first 48 hours. Then take 2 mL 3 times daily for next 8-9 days. May be added to foods/drinks.	Adults: 500-1,500 mg herb extract Children: 250-750 mg herb extract.	If pregnant, nursing, or taking any medications, consult a healthcare professional before use. Not recommended for individuals with auto-immune conditions.
Echinacea Single Herbal Tincture 150mL	Tincture	<i>Echinacea</i> (species not specified).	Dried herb to liquid ratio W/V 1:5 or fresh herb to liquid ratio W/V 1:3.	Dosage is normally between 1mL and 5 mL added to a little water up to three times a day.	3 - 15 mL herb extract daily equivalent to 600 - 3,000 mg dried herb or 1,000 - 5,000 mg fresh herb.	NA

Baldwins Echinacea (angustifolia) Herbal Tincture	Tincture	<i>Echinacea angustifolia</i> .	Herb:Liquid 1:3.	No guidance.	No guidance.	NA
Napiers the Herbalists Napier's Organic Echinacea Drops	Oral drops	<i>Echinacea purpurea</i> herb (aerial parts).	Not stated.	Take 15-20 drops 2-3 times a day. 15 drops = 0.5 mL.	30 - 60 drops daily. Equivalent to 1-2 mL solution.	Not suitable for children under 12 years. Do not take if pregnant or breastfeeding
100% Organic Echinacea Tincture Viridian 50ml	Tincture	<i>Echinacea purpurea</i> whole plant.	1 mL = 480 mg whole fresh plant.	Take 15 - 30 drops, 2-3 times daily in a little fruit juice or water. 15 drops = 0.5 mL.	31 - 60 drops daily. Equivalent to 1-2 mL solution or 480 - 960 mg fresh plant.	Not to be used during pregnancy or lactation unless recommended by a healthcare practitioner.

NOW Foods, Echinacea Extract, 2 fl oz (59 ml)	Oral solution	<i>Echinacea angustifolia</i> and <i>Echinacea purpurea</i> root.	Root extract. 1.6 mL per 2 droppersfuls.	Take 1 to 2 droppersful in tea or water 1 to 3 times daily as needed. Continuous high-level consumption of this product for more than 2 weeks of each month is not recommended.	0.8 - 4.8 mL.	Not recommended for pregnant or nursing women.
Cytoplan Organic Echinacea	Oral solution	<i>Echinacea angustifolia</i>	1:3 extract.	Take 20 drops mixed into water or liquid of choice 2-3 times daily. 20 drops = 2mL.	40-60 drops daily. Equivalent to 4-6 mL extract daily.	Not suitable for children under 12 years of age. Not suitable for use whilst pregnant or breastfeeding

Table 10: Combined acute exposure scenarios for the consumption 4-5 products of Echinacea (as dried root/herb) during pregnancy.

Estimated exposure to <i>Echinacea</i> (mg/day)	Estimated exposure to <i>Echinacea</i> (mg/day)	Estimated exposure to <i>Echinacea</i> (mg/day)	Estimated exposure to <i>Echinacea</i> (mg/day)	Estimated exposure to <i>Echinacea</i> (mg/day)	Estimated exposure to <i>Echinacea</i> (mg/day)
Tea	Honey	Lozenges	Tablets/capsules	Oral liquids	Total consumed per day

860 - 6,000	19 - 100	40	400 - 3,600	600 - 3,000	1,900 - 13,000
N/A	19 - 100	40	400 - 3,600	600 - 3,000	1,100 - 6,700
860 - 6,000	N/A	40	400 - 3,600	600 - 3,000	1,900 - 13,000
860 - 6,000	19 - 100	N/A	400 - 3,600	600 - 3,000	1,900 - 13,000
860 - 6,000	19 - 100	40	N/A	600 - 3,000	1,500 - 9,100
860 - 6,000	19 - 100	40	400 - 3,600	N/A	1,300 - 9,700

*Rounded to 2 significant figures.

Table 11: Combined acute exposure scenarios for the consumption of 3 products of *Echinacea* (as dried root/herb) during pregnancy.

Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)
Tea	Honey	Lozenges	Tablets/capsules	Oral liquids	Total consumed per day
860 - 6,000	19 - 100	40	N/A	N/A	920 - 6,100

860 - 6,000	19 - 100	N/A	400 - 3,600	N/A	1,300 - 9,700
860 - 6,000	19 - 100	N/A	N/A	600 - 3,000	1,500 - 9,100
860 - 6,000	N/A	N/A	400 - 3,600	600 - 3,000	1,900 - 13,000
860 - 6,000	N/A	40	400 - 3,600	N/A	1,300 - 9,600
860 - 6,000	N/A	40	N/A	600 - 3,000	1,500 - 9,000
N/A	N/A	40	400 - 3,600	600 - 3,000	1,000 - 6,700
N/A	19 - 100	N/A	400 - 3,600	600 - 3,000	1,000 - 6,700
N/A	19 - 100	40	400 - 3,600	N/A	460 - 3,700
N/A	19 - 100	40	N/A	600 - 3,000	660 - 3,100

*Rounded to 2 significant figures.

Table 12: Combined acute exposure scenarios for the consumption of 2 products of Echinacea (as dried root/herb) during pregnancy.

Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)	Estimated exposure to Echinacea (mg/day)
Tea	Honey	Lozenges	Tablets/capsules	Oral liquids	Total consumed per day
860 - 6,000	19 - 100	N/A	N/A	N/A	900 - 6,100
860 - 6,000	N/A	40	N/A	N/A	900 - 6,000
860 - 6,000	N/A	N/A	400 - 3,600	N/A	1,300 - 9,600
860 - 6,000	N/A	N/A	N/A	600 - 3,000	1,500 - 9,600
N/A	19 - 100	40	N/A	N/A	60 - 140
N/A	19 - 100	N/A	400 - 3,600	N/A	420 - 3,700
N/A	19 - 100	N/A	N/A	600 - 3,000	620 - 3,100
N/A	N/A	40	400 - 3,600	N/A	440 - 3,600
N/A	N/A	40	N/A	600 - 3,000	640 - 3,000
N/A	N/A	N/A	400 - 3,600	600 - 3,000	1,000 - 6,600

*Rounded to 2 significant figures.

Table 13: Echinacea products (oral dosage forms) with THR in the UK.

Product name	Dosage form	<i>Echinacea</i> species and plant part	Composition	Directions for use	Daily dose <i>Echinacea</i> (mg)
Echinaflu Soft Capsules	Capsules	<i>Echinacea purpurea</i> (L.) Moench herb.	176 mg of dried pressed juice from fresh flowering herb equivalent to 3.5-4.9 g of fresh herb (DER 20-28:1).	1-2 capsules daily for no longer than 10 days.	176 - 352 mg dried pressed juice equivalent to 3.5 - 9.8 g fresh herb.
Echinacea Cold and Flu Capsules	Capsules	<i>Echinacea purpurea</i> (L.) Moench) root.	140 mg dry extract from root equivalent to 838 - 1117 mg root (DER 6-8:1).	1 capsule twice a day.	280 mg dry root extract equivalent to 1,676-2,234 mg root.
Ekinalife	Capsules	<i>Echinacea pallida</i> (Nutt.) Nutt. root and <i>Echinacea purpurea</i> (L.) Moench root.	200mg of <i>Echinacea pallida</i> . Nutt. and 200mg of <i>Echinacea purpurea</i> (L.) Moench powdered root.	1 capsule twice a day for no longer than 10 days.	400 mg <i>E. pallida</i> powdered root and 400 mg <i>E. purpurea</i> powdered root. Total of 1,600 mg powdered root.

Solgar Echinacea Cold and Flu Capsules	Capsules	<i>Echinacea purpurea</i> (L.) Moench root.	140 mg dry extract from root equivalent to 838 - 1117 mg root (DER 6-8:1).	1 capsule twice a day for no longer than 10 days.	280 mg dry root extract equivalent to 1,676- 2,234 mg root.
Phytocold	Capsules	<i>Echinacea purpurea</i> (L.) Moench root.	250 mg powdered root.	1-2 capsules three times a day fo no longer than 10 days.	750 - 1,500 mg powdered root.
Echinaflu Effervescent Tablets	Effervescent Tablets	<i>Echinacea purpurea</i> (L.) Moench herb.	176 mg of dried pressed juice from fresh flowering herb equivalent to 3.5-4.9 g of fresh herb (DER 20- 28:1).	1-2 tablets daily for no longer than 10 days.	176 - 352 mg dried pressed juice equivalent to 3.5 - 9.8 g fresh herb.
Echineeze	Tablets	<i>Echinacea purpurea</i> (L.) Moench root.	70 mg dry extract from root equivalent to 460 - 530 mg root (DER 6.5-7.5:1).	1 tablet 3 times a day for no longer than 10 days.	210 mg dry root extract equivalent to 1,380 - 1,590 mg root.

Echinaforce Forte Cold & Flu Tablets		<i>Echinacea purpurea</i> (L.) Moench herb and root.	1,140 mg dry extract from fresh herb (DER 1:12) and 60 mg (DER 1:11) dry extract from fresh root.	1 tablet two to three times a day for no longer than 10 days.	2,280 - 3,420 mg dry herb extract and 120-180 mg dry root extract.
Herbal Cold And Flu Relief Tablets	Tablets	<i>Echinacea purpurea</i> (L.) Moench root.	71.5 mg dry extract from root equivalent to 429 - 500 mg root (DER 6-7:1).	1-2 tablets twice daily for no longer than 10 days.	143-286 mg dry root extract equivalent to 858 - 2,000 mg root.
High Strength Herbal Cold And Flu Relief Tablets	Tablets	<i>Echinacea purpurea</i> (L.) Moench root.	143 mg dry extract from root equivalent to 858 - 1000 mg root (DER 6-7:1).	1 tablet three times a day for no longer than 10 days.	429 mg dry root extract equivalent to 2,574 - 3,000 mg root.
Echinacea Skin Care Tablets	Tablets	<i>Echinacea purpurea</i> (L.) Moench root.	71.5 mg dry extract from root equivalent to 429 - 500 mg root (DER 6-7:1).	1-2 tablets three times a day for no longer than 10 days.	143-286 mg dry root extract equivalent to 858 - 2,000 mg root.

Herbal Classics Echinacea Cold Relief Film-Coated Tablets	Tablets	<i>Echinacea purpurea</i> (L.) Moench root.	40 mg dry extract from root equivalent to 260 mg root (DER 6.5:1).	2-3 tablets three times a day.	240-360 mg dry root extract equivalent to 1,560 - 2,340 mg root.
HRI Cold And Flu Echinacea Tablets	Tablets	<i>Echinacea purpurea</i> (L.) Moench root.	56 mg dry extract from root equivalent to 338 - 450 mg root (DER 6-8:1).	1-2 tablets twice daily.	112-224 mg dry root extract equivalent to 676-1,800 mg root.
Echinapret Coated Tablets	Tablets	<i>Echinacea purpurea</i> (L.) Moench herb.	175 mg of dried pressed juice from fresh flowering herb equivalent to 6.7 - 9.8 g fresh herb (DER 38 - 56:1).	1 tablet three times a day for no longer than 10 days.	525 mg dried pressed juice equivalent to 18.4 - 29.4 mg fresh herb.
Thompson and Capper Echinacea Cold-n-Flu-Eze	Tablets	<i>Echinacea purpurea</i> (L.) Moench root.	105 mg dry extract from root equivalent to 630 - 840 mg root (DER 6-8:1).	1 tablet twice a day for no longer than 10 days.	210 mg dry root extract equivalent to 1,260 - 1,680 mg root.

Fuerte Tablets	Tablets	Wild indigo root (<i>Baptisia tinctoria</i> (L.) R.Br.), <i>Echinacea purpurea</i> root (<i>Echinacea purpurea</i> (L.) Moench), <i>Echinacea pallida</i> root (<i>Echinacea pallida</i> (Nutt.) Nutt.), White cedar tips and leaves (<i>Thuja occidentalis</i> L.)	3.2 mg dry root extract (DER 4- 9:1) from Wild indigo root, <i>E. purpurea</i> root, <i>E. pallida</i> root and Wild cedar tips and leaves (4.92:1.85:1.85:1).	5 tablets three times a day for no longer than 10 days.	9.2 mg <i>E. pallida</i> and 9.2 mg <i>E. purpurea</i> dry root extract. Total 18.4 mg dry root extract equivalent to 73.6- 165.6 mg root.
		<i>Echinacea purpurea</i> (L.) Moench root.	70 mg dry extract from root equivalent to 420 - 560 mg root (DER 6-8:1).	1 tablet three times a day for no longer than 10 days.	210 mg dry root extract equivalent to 1,260 - 1,680 mg root.
Healthsense Echinashield Cold and Flu Tablets	Tablets				

Lamberts Echinacea Cold & Flu relief tablets Nature's Best Echinacea Cold & Flu Relief tablets	Tablets	<i>Echinacea purpurea</i> (L.) Moench root.	105 mg dry extract from root equivalent to 630 - 840 mg root (DER 6-8:1).	1 tablet twice a day for no longer than 10 days.	210 mg dry root extract equivalent to 1,260 - 1,680 mg root.
Vitabiotics Echinacea Tablets	Tablets	<i>Echinacea purpurea</i> (L.) Moench root.	200 mg dry extract from root equivalent to 1200 - 1600 mg root (DER 6-8:1).	1 tablet twice a day for no longer than 10 days.	400 mg dry root extract equivalent to 2,400 - 3,200 mg root.
Potter's Skin Clear Tablets	Tablets	<i>Echinacea angustifolia</i> (D.C) root.	110 mg dry extract from root equivalent to 500 mg root (DER 4.5:1).	2 tablets three times a day for no longer than 10 days.	660 mg dry root extract equivalent to 2,970 mg root.
EKINACLEAR Tablets		<i>Echinacea purpurea</i> (L.) Moench root.	50 mg dry extract from root equivalent to 300 - 400 mg root (DER 6-8:1).	1-2 tablets three times a day for no longer than 10 days.	150-300 mg dry root extract equivalent to 900- 2,400 mg root.

Lifeplan Echinacea Cold and Flu Tablets Relief Tablets		<i>Echinacea purpurea</i> (L.) Moench root.	140 mg dry extract from root equivalent to 840 - 1120 mg root (DER 6-8:1).	1 tablet twice a day for no longer than 10 days.	150-300 mg dry root extract equivalent to 900- 2,400 mg root.
Echinaforce Chewable Cold & Flu Tablets	Chewable tablets.	<i>Echinacea purpurea</i> (L.) Moench herb and root.	380 mg dry extract from fresh herb (DER 1:12) and 20 mg dry extract (DER 1:11) from fresh root.	2 tablets two to three times a day for no longer than 10 days.	1,520 - 2,280 mg dry herb extract and 80- 120 mg dry root extract.
Herbal Cold And Flu Sachets	Sachets	<i>Echinacea purpurea</i> (L.) Moench root.	71.5 mg dry extract from root equivalent to 429 - 500 mg root (DER 6-7:1).	1 sachet three times a day for no longer than 10 days.	214.5 mg dry root extract equivalent to 1,287- 1,500 mg root.
Cystorelief Cystitis Uva- ursi & Echinacea oral drops ^a	Tincture	<i>Echinacea purpurea</i> (L.) Moench herb, Uva-ursi herb (<i>Arctostaphylos uva-ursi</i> (L.) Spreng, Herb).	240 mg of tincture from fresh herb (DER 1:12) per 1 ml.	15 drops in a little water 2-5 times daily. 1mL is equivalent to 30 drops.	240-600 mg of tincture from fresh herb.

Potter's Elixir of Echinacea Plus/Napiers Elixir of Echinacea Complex ^b	Oral solution	<i>Echinacea angustifolia</i> (D.C) root, Wild Indigo root, Fumitory herb.	0.64 mL liquid extract from root equivalent to 640 mg root per 5 mL (DER 1:1).	5 mL three times a day for no longer than 10 days.	1.92 mL liquid root extract equivalent to 1.92 g root.
Echinacin Juice MADAUS	Oral solution	<i>Echinacea purpurea</i> (L.) Moench) herb.	117 mg of dried pressed juice from fresh flowering herb equivalent to 3.7 - 6.3 g of fresh herb per 5 mL (DER 31.5-53.6:1).	5 mL three times a day for no longer than 10 days.	351 mg dried pressed juice equivalent to 11.1 - 18.9 g fresh herb.
Echinacin Liquidum MADAUS ^c	Oral solution	<i>Echinacea purpurea</i> (L.) Moench) herb.	1.99 g of pressed juice from fresh flowering herb equivalent to 3.4 - 5 g of fresh herb per 2.5 mL (DER 1.7-2.5:1).	2.5 mL three times a day for no longer than 10 days.	5,970 mg pressed juice equivalent to 10.2-15 g fresh herb.

Echinaforce hot drink cold & flu echinacea concentrate for oral solution	Tincture	<i>Echinacea purpurea</i> (L.) Moench herb and root.	1,140 mg extract (as tincture) from fresh herb (DER 1:12-13) and 60 mg extract (as tincture) from fresh root (DER 1:11-12) per 5 mL.	Days 1-3: Take 5 ml diluted in hot water five times daily. Days 4-10: Take 5 ml diluted in hot water three times daily.	3,420 - 5,700 mg herb extract (tincture) and 180- 300 mg root extract (tincture).
Echinaforce Sore Throat Spray ^d	Oromucosal spray	<i>Echinacea purpurea</i> (L.) Moench herb and root, Sage leaves, (<i>Salvia officinalis</i> L. <i>folium</i>).	863.3 mg tincture from fresh herb (DER 1:12) and 45.5 mg tincture from fresh root (DER 1:11) per 1 mL.	1 spray (0.22 mL) six to ten times a day for no more than 7 days.	1,147 - 1,910 mg herb tincture and 60 - 100 mg root tincture.
Duchy Herbals Echina- Relief Tincture ^e	Tincture	<i>Echinacea purpurea</i> (L.) Moench root.	1mL of tincture from dried root (1:3) (equivalent to 33 mg dried root) per 1 mL tincture.	2.5 ml of tincture, in water, two or three times daily for no longer than 10 days.	5-7.5 mL tincture equivalent to 165 - 248 mg dried root.

^a 1 mL contains 426 mg ethanol equivalent to 10.8 mL beer or 4.5 mL wine (43% v/v ethanol content).

^b 5 mL contains 760 mg ethanol equivalent to 19 mL beer or 7.9 mL wine (19 % v/v ethanol content).

^c 1 mL contains 179 mg ethanol equivalent to 4 mL beer or 1.6 mL wine (18% v/v ethanol content).

^d 1 mL contains 370 mg ethanol equivalent to 8.4 mL beer or 3.4 mL wine (38-42% v/v ethanol content).

^e 2.5 mL contains 900 mg ethanol equivalent to 23 mL beer or 10 mL wine (38-45% v/v ethanol content).

Table 14: Summary of doses and preparations of THR products in the UK and EMA monographs.

<i>Echinacea</i> species	Daily dose THR products UK	EMA monographs daily doses
<i>Echinacea purpurea</i>	Pressed juice from herb (DER 1.7-2.5:1): 5,970 mg (equivalent to 10.2-15 g fresh herb)	Pressed juice from herb (DER 1.5-2.5:1): 6 - 9 g (equivalent to 9 - 22.5 g fresh herb)
	Dried pressed juice from herb (DER 20-28:1): 176-352 mg (equivalent to 3.5 - 9.8 g fresh herb)	Dried pressed juice: Corresponding to the expressed juice above
	Dry root extract (DER 6-7:1): 143 - 429 mg (equivalent to 858 - 3,000 mg root)	(EMA monograph, 2014).
	Powdered root: 250 -1500 mg.	Dry root extract (DER 5.5-7.5:1): 360 mg (equivalent to 1,980 - 2,700 mg root).
		(EMA monograph, 2017).

*Echinacea
angustifolia*

Dry root extract (DER 4.5:1):
660 mg equivalent to 2,970 mg root.
Liquid root extract (DER 1:1):
1.92 mL (equivalent to 1,920 mg
root).

Powdered root:
500-1,500 mg
**Liquid root extract (DER
1:1):**
0.75 - 3 mL (equivalent to
750 -3,000 mg root)
Tincture (DER 5:1):
3-6 mL (equivalent to
1,500 - 3,000 mg root).

(EMA monograph 2018).

*Echinacea
pallida*

Dry root extract (DER 4-9:1):
9.2 mg *E. pallida* and 9.2 mg *E.
purpurea* (equivalent to 36.8-82.8
mg root)
Powdered root:
400 mg *E. pallida* and 400 mg *E.
purpurea*.

**Dry root extract (DER 4-
8:1):**
90-96 mg (equivalent to
360 - 786 mg root).

(EMA monograph 2012).