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Committee on Herbal Medicinal Products (HMPC)

European Union herbal monograph on *Valeriana officinalis* L., radix

Draft

Initial assessment	
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First systematic review	
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Keywords	Herbal medicinal products; HMPC; European Union herbal monographs; well-established medicinal use; traditional use; *Valeriana officinalis* L., radix; Valerianae radix; valerian root

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BG (bulgarski): Валериана, корен CS (čeština): kozlíkový kořen DA (dansk): Baldrianrod DE (Deutsch): Baldrianwurzel EL (elliniká): Ρίζα βαλεριανής EN (English): Valerian root ES (español): Valeriana, raíz de ET (eesti keel): palderjanijuur FI (suomi): rohtovirmajuuri, juuri FR (français): Valériane (racine de) HR (hrvatski): odoljenov korijen HU (magyar): Macskagyökér IT (italiano): Valeriana radice	LT (lietuvių kalba): Valerijonų šaknys LV (latviešu valoda): Baldriāna saknes MT (Malti): Għerq tal-Valerjana NL (Nederlands): Valeriaanwortel PL (polski): Korzeń kozłka PT (português): Valeriana, raiz RO (română): rădăcină de valeriană SK (slovenčina): Koreň valeriány SL (slovenščina): korenina zdravilne špajke SV (svenska): Vänderot, rot *IS (íslenska)*: *NO (norsk):* Valerianarot

European Union herbal monograph on *Valeriana officinalis* L., radix

1. Name of the medicinal product

To be specified for the individual finished product.

2. Qualitative and quantitative composition[1, 2]

Well-established use	**Traditional use**
With regard to the marketing authorisation application of Article 10(a) of Directive 2001/83/EC as amended *Valeriana officinalis* L., radix (valerian root) i) Herbal substance Not applicable. ii) Herbal preparations Dry extract (DER 3-7:1), extraction solvent: ethanol 40-70% (V/V)	With regard to the registration application of Article 16d(1) of Directive 2001/83/EC as amended *Valeriana officinalis* L., radix (valerian root) i) Herbal substance Not applicable. ii) Herbal preparations a) Comminuted herbal substance b) Powdered herbal substance c) Expressed juice from fresh root (1:0.60-0.85) d) Dry extract (DER 4-6:1), extraction solvent: water e) Liquid extract (DER 1:4-6), extraction solvent: water f) Dry extract (DER 4-7:1), extraction solvent methanol 45% (V/V) g) Dry extract (DER 5.3-6.6:1), extraction solvent: methanol 45% (m/m) h) Liquid extract (DER 1:7-9), extraction solvent: sweet vine i) Dry extract (DER 4-5:1), extraction solvent: ethanol 35% (m/m) j) Liquid extract (DER 1:1), extraction solvent: ethanol 60% (V/V) k) Tincture (ratio of herbal substance to extraction solvent 1:8), extraction solvent ethanol 60% (V/V) l) Tincture (ratio of herbal substance to extraction solvent 1:10), extraction solvent ethanol 56%

[1] The declaration of the active substance(s) for an individual finished product should be in accordance with relevant herbal quality guidance.

[2] The material complies with the Ph. Eur. monograph (ref.: 0453).

Well-established use	Traditional use
	m) Tincture (ratio of herbal substance to extraction solvent 1:5), extraction solvent: ethanol 70% (V/V) n) Tincture (ratio of herbal substance to extraction solvent 1:5), extraction solvent ethanol 60-80% (V/V) o) Dry extract (DER 5.5-7.4:1), extraction solvent: ethanol 70-90% (V/V)

3. Pharmaceutical form

Well-established use	Traditional use
Herbal preparations in solid dosage forms for oral use. The pharmaceutical form should be described by the European Pharmacopoeia full standard term.	Comminuted herbal substance as herbal tea for oral use. Herbal preparation in liquid or solid dosage forms for oral use. Comminuted herbal substance for use as bath additive. The pharmaceutical form should be described by the European Pharmacopoeia full standard term.

4. Clinical particulars

4.1. Therapeutic indications

Well-established use	Traditional use
Herbal medicinal product for the relief of mild nervous tension and sleep disorders.	Traditional herbal medicinal product for relief of mild symptoms of mental stress and to aid sleep. The product is a traditional herbal medicinal product for use in the specified indication exclusively based upon long-standing use.

4.2. Posology and method of administration[3]

Well-established use	**Traditional use**
Posology *Adolescents, adults and elderly* **Oral use** Single dose: 450-600 mg dry extract; equivalent to 2 to 3 g of the herbal substance For relief of mild nervous tension up to 3 times daily. For relief of sleep disorders, a single dose half to one hour before bedtime with an earlier dose during the evening if necessary. Maximum daily dose: 4 single doses The use in children under 12 years of age is not recommended (see section 4.4 'Special warnings and precautions for use'). **Duration of use** Because of its gradual onset of efficacy valerian root is not suitable for acute interventional treatment of mild nervous tension or sleep disorders. To achieve an optimal treatment effect, continued use over 2-4 weeks is recommended. If symptoms persist or worsen after 2 weeks of continued use, a doctor should be consulted. **Method of administration** Oral use.	**Posology** *Adolescents, adults and elderly* **Oral Use** a) single dose: 0.3-3 g For relief of mild symptoms of mental stress up to 3 times daily. To aid sleep, a single dose half to one hour before bedtime with an earlier dose during the evening if necessary. Herbal tea: 0.3-3 g of the comminuted herbal substance in 150 ml of boiling water as a herbal infusion b) single dose: 0.76-2.0 g, up to 3 times daily c) single dose: 10 ml For relief of mild symptoms of mental stress up to 3 times daily. To aid sleep, a single dose half to one hour before bedtime with an earlier dose during the evening if necessary. d) single dose: 420 mg For relief of mild symptoms of mental stress up to 3 times daily. To aid sleep, a single dose half to one hour before bedtime with an earlier dose during the evening if necessary. e) single dose: 20 ml For relief of mild symptoms of mental stress up to 3 times daily. To aid sleep, a single dose half to one hour before bedtime. f) single dose: 144-288 mg For relief of mild symptoms of mental stress up to 4 times daily. To aid sleep, a single dose half to one hour before bedtime with an earlier dose during the evening if necessary.

[3] For guidance on herbal substance/herbal preparation administered as herbal tea or as infusion/decoction/macerate preparation, please refer to the HMPC 'Glossary on herbal teas' (EMA/HMPC/5829/2010 Rev.1).

Well-established use	Traditional use
	g) single dose: 380-570 mg For relief of mild symptoms of mental stress up to 3 times daily. To aid sleep, a single dose half to one hour before bedtime with an earlier dose during the evening if necessary. h) single dose: 10 ml, up to 3 times daily i) single dose: 427-599 mg, up to 3 times daily j) single dose: 0.3-1.0 ml, up to 3 times daily k) single dose: 4-8 ml, up to 3 times daily l) single dose: 0.84 ml For relief of mild symptoms of mental stress 3-5 times daily. To aid sleep, a single dose half an hour before bedtime. m) single dose: 1.5 ml (mental stress), 3 ml (to aid sleep) For relief of mild symptoms of mental stress up to 3 times daily. To aid sleep, a single dose half an hour before bedtime. n) single dose: 10 ml, up to 3 times daily o) single dose: 322-441.35 mg, up to 3 times daily The use in children under 12 years of age is not recommended (see section 4.4 'Special warnings and precautions for use'). **Use as bath additive** a) single dose: 100 g for a full bath; up to 1 bath daily The use in children under 12 years of age is not recommended (see section 4.4 'Special warnings and precautions for use'). **Duration of use** If symptoms persist during the use of the medicinal product, a doctor or a qualified health care practitioner should be consulted.

Well-established use	Traditional use
	Method of administration Oral use. Use as bath additive. Temperature: 34-37°C, duration of bath 10-20 minutes.

4.3. Contraindications

Well-established use	Traditional use
Hypersensitivity to the active substance.	Hypersensitivity to the active substance. **Use as bath additive** Full baths are contraindicated in cases of open wounds, large skin injuries, acute skin diseases, high fever, severe infections, severe circulatory disturbances and cardiac insufficiency.

4.4. Special warnings and precautions for use

Well-established use	Traditional use
The use is not recommended in children below 12 years of age due to a lack of data on safety and efficacy. Combination with other sedatives requires medical diagnosis and supervision. If the symptoms worsen during the use of the medicinal product, a doctor or a pharmacist should be consulted.	The use in children under 12 years of age has not been established due to lack of adequate data. If the symptoms worsen during the use of the medicinal product, a doctor or a qualified health care practitioner should be consulted. For tinctures and extracts containing ethanol, the appropriate labelling for ethanol, taken from the 'Guideline on excipients in the label and package leaflet of medicinal products for human use', must be included.

4.5. Interactions with other medicinal products and other forms of interaction

Well-established use	Traditional use
None reported.	None reported.

4.6. Fertility, pregnancy and lactation

Well-established use	**Traditional use**
Safety during pregnancy and lactation has not been established. In the absence of sufficient data, use during pregnancy and lactation is not recommended. No fertility data available.	Safety during pregnancy and lactation has not been established. In the absence of sufficient data, use during pregnancy and lactation is not recommended. No fertility data available.

4.7. Effects on ability to drive and use machines

Well-established use	**Traditional use**
May impair ability to drive and use machines. Affected patients should not drive or operate machinery.	May impair ability to drive and use machines. Affected patients should not drive or operate machinery.

4.8. Undesirable effects

Well-established use	**Traditional use**
Gastrointestinal symptoms (e.g. nausea, abdominal cramps) may occur after ingestion of valerian root preparations. The frequency is not known. If other adverse reactions not mentioned above occur, a doctor or a pharmacist should be consulted.	**Oral use** Gastrointestinal symptoms (e.g. nausea, abdominal cramps) may occur after ingestion of valerian root preparations. The frequency is not known. If other adverse reactions not mentioned above occur, a doctor or a qualified health care practitioner should be consulted. **Use as bath additive** None known. If adverse reactions occur, a doctor or a qualified health care practitioner should be consulted.

4.9. Overdose

Well-established use	**Traditional use**
Valerian root at a dose of approximately 20 g caused symptoms such as fatigue, abdominal cramp, chest tightness, lightheadedness, hand tremor and mydriasis, which disappeared within 24 hours. If symptoms arise, treatment should be supportive.	**Oral use** Valerian root at a dose of approximately 20 g caused symptoms, such as fatigue, abdominal cramp, chest tightness, lightheadedness, hand tremor and mydriasis, which disappeared within 24 hours. If symptoms arise, treatment should be supportive. **Use as bath additive** No case of overdose has been reported.

5. Pharmacological properties

5.1. Pharmacodynamic properties

Well-established use	**Traditional use**
Pharmacotherapeutic group: Hypnotics and sedatives Proposed ATC code: N05C M09 The sedative effects of preparations of valerian root, which have long been recognised empirically, have been confirmed in controlled clinical studies. Orally administered dry extracts of valerian root prepared with ethanol/water (ethanol max. 70% (V/V)) in the recommended dosage have been shown to improve sleep latency and sleep quality. These effects cannot be attributed with certainty to any known constituents.	Not required as per Article 16c(1)(a)(iii) of Directive 2001/83/EC as amended.

5.2. Pharmacokinetic properties

Well-established use	**Traditional use**
No data available.	Not required as per Article 16c(1)(a)(iii) of Directive 2001/83/EC as amended.

5.3. Preclinical safety data[4]

Well-established use	Traditional use
Ethanol extracts of valerian root have shown low toxicity in rodents during acute tests and from repeated dose toxicity over periods of 4-8 weeks. AMES-tests on mutagenicity for the dry extract (4-7:1); extraction solvent: ethanol 40% (V/V) and the dry extract (DER 3-6:1), extraction solvent: ethanol 70% (V/V) did not give any reason for concern. Tests on reproductive toxicity and carcinogenicity have not been performed.	AMES-tests on mutagenicity with extracts, representing the two extremes of the polarity range did not give any reason for concern. Tests on reproductive toxicity and carcinogenicity have not been performed.

6. Pharmaceutical particulars

Well-established use	Traditional use
Not applicable.	Not applicable.

7. Date of compilation/last revision

7 July 2015

[4] Where valerian root is used as powder, the total exposure to valepotriates and degradation products such as baldrinals should not exceed the maximum exposure with herbal tea (prepared infusion). Alkylating and cytotoxic properties of valepotriates and baldrinals are normally not relevant for finished products because valepotriates decompose rapidly and only traces of valepotriates or their degradation products such as baldrinals are found. Where the applicant cannot demonstrate that the total exposure to valepotriates with the finished product does not exceed the maximum exposure with herbal tea, he has to provide data on determination of the threshold of toxicological concern compatible with the safe use of the preparation.