

**Zanthoxylum Fruit**

Prickly Ash Berries; Zanthoxylum, fruto de.

**Pharmacopoeias.** In *Chin.* and *Jpn.*

**Profile**

Zanthoxylum fruit is the pericarp of the ripe fruit of *Zanthoxylum piperitum* (*Zanthoxylum piperitum*) (Rutaceae) or other species of *Zanthoxylum*. It contains about 3.3% v/w of essential oil.

Zanthoxylum (BPC 1934) (Toothache Bark; Xanthoxylum) is the dried bark of the northern prickly ash, *Z. americanum*, or the southern prickly ash, *Z. clavaherculis*. Both varieties contain a complex mixture of components, including benzophenanthridine alkaloids; northern prickly ash also contains coumarins.

Zanthoxylum fruit has carminative properties and has been used for rheumatic disorders. Zanthoxylum bark has been used similarly, but there is some concern about the potential toxicity of the benzophenanthridine alkaloids which it contains, and some authorities consider that it should not be recommended.

**Preparations**

**Proprietary Preparations** (details are given in Part 3)

**Multi-ingredient:** **Austral.:** For Peripheral Circulation Herbal Plus Formula 5; Lifesystem Herbal Formula 6 For Peripheral Circulation†; Uva-Ursi Plus†; **Fr.:** Node K; Phytelol; **UK:** Daily Overwork & Mental Fatigue Relief; Peerless Composition Essence; Tabritis.

**Zein**

Zeína.

CAS — 9010-66-6 (zeins).

**Pharmacopoeias.** In *Chin.* Also in *USNF*.

**USNF 26** (Zein). A prolamine derived from corn, *Zea mays* (Gramineae). A white to yellow powder. Insoluble in water and in acetone; readily soluble in acetone-water mixtures between the limits of 60% and 80% of acetone by volume; soluble in aqueous alcohols, in ethoxyethanol; in glycols, in furfuryl alcohol, in tetrahydrofurfuryl alcohol, and in aqueous alkaline solutions of pH 11.5 and above; insoluble in all anhydrous alcohols except methyl alcohol. Store in airtight containers.

**Profile**

Zein is used as a tablet binder and coating agent for pharmaceutical preparations and foodstuffs. It has been used as a substitute for shellac.

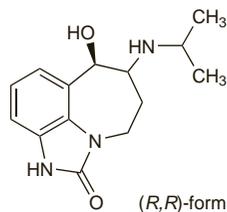
**Zilpaterol Hydrochloride** (INN) ⊗

Hidrocloruro de zilpaterol; RU-42173 (base or hydrochloride); Zilpaterol, Chlorhydrate de; Zilpateroli Hydrochloridum. (±)-*trans*-4,5,6,7-Tetrahydro-7-hydroxy-6-(isopropylamino)imidazo-[4,5,1-*jk*][1]benzazepin-2(1*H*)-one hydrochloride.

Зилпатерола Гидрохлорид

C<sub>14</sub>H<sub>19</sub>N<sub>3</sub>O<sub>2</sub>·HCl = 297.8.

CAS — 117827-79-9 (zilpaterol); 119520-05-7 (zilpaterol); 119520-06-8 (zilpaterol hydrochloride).



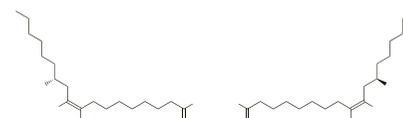
(zilpaterol)

**Profile**

Zilpaterol hydrochloride is a beta<sub>2</sub>-agonist. It is employed in the USA and some other countries as an animal-feed additive to promote weight gain but such use is not permitted in the EU. It has anabolic properties and may be subject to abuse in sport.

**Zinc Ricinoleate**

Рицинолеат Цинка  
(C<sub>18</sub>H<sub>33</sub>O<sub>3</sub>)<sub>2</sub>Zn = 660.3.  
CAS — 13040-19-2.

**Profile**

Zinc ricinoleate is used in preparations to combat body odour including underarm, colostomy, and ileostomy deodorant products. It is also used as a deodoriser in laundry products.

**Preparations**

**Proprietary Preparations** (details are given in Part 3)

**Ital.:** Antio.

**Multi-ingredient:** **Austral.:** Banish II.

**Zirconium**

Circonio; Zirconio; Zirkonium.

Zr = 91.224.

CAS — 7440-67-7 (zirconium); 1314-23-4 (zirconium dioxide); 60676-90-6 (zirconium lactate); 7699-43-6 (zirconium oxychloride).

**Profile**

Zirconium and its compounds e.g. zirconium dioxide, zirconium lactate, and zirconium oxychloride, have been used in deodorant preparations; the dioxide is also used in dentistry. There have been reports of hypersensitivity reactions with granulomas. Zirconium dioxide has also been used as a contrast medium.

**Adverse effects.** A report<sup>1</sup> of pulmonary fibrosis associated with inhalation of a polishing agent containing mainly zirconium dioxide with quartz.

1. Barter T, *et al.* Zirconium compound-induced pulmonary fibrosis. *Arch Intern Med* 1991; **151**: 1197-1201.