

# Summary of Product Characteristics

## 1 NAME OF THE MEDICINAL PRODUCT

Solpa Cold & Flu Multi-Relief Capsules Paracetamol 500mg, Guaifenesin 100mg, Phenylephrine hydrochloride 6.1mg

## 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

| <b>Active Ingredient</b>    | <b>mg/Capsule</b>                             |
|-----------------------------|---|
| Paracetamol                 | 500   |
| Guaifenesin                 | 100   |
| Phenylephrine hydrochloride | 6.1 (corresponding to 5mg phenylephrine base) |
|                             |   |

For a full list of excipients, see section 6.1.

## 3 PHARMACEUTICAL FORM

Capsule, hard.

Dark blue/dark green hard gelatin capsules containing the drug product, an off-white powder.

## 4 CLINICAL PARTICULARS

### 4.1 Therapeutic indications

For the relief of symptoms associated with colds and flu and the pain and congestion of sinusitis, including aches and pains, headache, blocked nose and sore throat, chills, lowering of temperature, and to loosen stubborn mucous and provide relief from chesty coughs.

Solpa Cold & Flu Multi-Relief Capsules is indicated in adults, the elderly and adolescents aged 16 years and over.

### 4.2 Posology and method of administration

Posology

Adults, the elderly and adolescents aged 16 years and over:

Two capsules every 4-6 hours when necessary to a maximum of 4 doses in 24 hours.

No more than 8 capsules should be taking in any 24 hour period.

Solpa Cold & Flu Multi-Relief Capsules should not be used in adults, the elderly and adolescents aged 16 years and over, who weigh less than 50 kg

Paediatric population:

Do not give to children and adolescents under 16 years of age.

*Elderly patients*

Elderly patients, especially those who are frail or immobile, may require a reduced dose or frequency of dosing.

*Renal impairment*

Patients who have been diagnosed with kidney impairment must seek medical advice before taking this medication. It is recommended, when giving paracetamol to patients with renal failure, to reduce the dose and to increase the minimum interval between each administration to at least 6 hours. The restrictions related to the use of paracetamol products in patients with renal impairment are primarily a consequence of the paracetamol content of the drug (see section 4.4).

#### *Hepatic impairment*

Patients who have been diagnosed with hepatic impairment or Gilbert's Syndrome must seek medical advice before taking this medication. The medicinal product should be used with caution in patients with mild or moderate hepatic impairment (see section 4.4). The medicinal product is contraindicated in patients with severe hepatic impairment (see section 4.3). The restrictions related to the use of paracetamol products in patients with hepatic impairment are primarily a consequence of the paracetamol content of the drug (see section 4.4).

The maximum daily dose of paracetamol should not exceed 60 mg/kg/day (up to a maximum of 2 g per day) in the following situations, unless directed by a physician: (see section 4.4)

- Dehydration
- Malnutrition
- Chronic alcoholism

#### Method of administration

Route of administration: Oral.

Take capsules with water. Swallow whole, do not chew.

The recommended daily dosage or the specified number of doses should not be exceeded because of the risk of liver damage (see section 4.4 and 4.9).

Minimum dosing interval: 4 hours.

Dosage should not be continued for longer than 3 days without consulting a doctor.

### **4.3 Contraindications**

- Hypersensitivity to the active substances or any of the excipients listed in section 6.1.
- Use in patients currently receiving, or within two weeks of stopping, therapy with monoamine oxidase inhibitors (see Section 4.5).
- Hypertension.
- Cardiovascular disease, including severe ischemic heart disease.
- Hyperthyroidism.
- Diabetes mellitus.
- Pheochromocytoma.
- Use in patients receiving therapy with tricyclic antidepressants, beta-blockers or other antihypertensive agents (see section 4.5).
- Angle closure glaucoma.
- Severe hepatic impairment
- Pregnancy (see Section 4.6).
- Porphyria.
- Use in patients who are currently receiving other sympathomimetic drugs (see Section 4.5)

### **4.4 Special warnings and precautions for use**

Underlying liver disease increases the risk of paracetamol-related liver damage. Paracetamol should be administered with caution to patients with renal impairment and mild or moderate hepatic impairment. The hazards of overdose are greater in those with non-cirrhotic alcoholic liver disease.

The product should be administered only with particular caution under the following circumstances:

- Circulatory disorders such as Raynaud's Phenomenon
- Chronic alcoholism
- Urinary retention or prostatic hypertrophy.
- Gilbert's Syndrome (familial non-haemolytic jaundice)

- Concomitant treatment with medicinal products affecting hepatic function
- Glucose-6-phosphate dehydrogenase deficiency
- Haemolytic anaemia
- Glutathione deficiency
- Dehydration
- Chronic malnutrition
- The elderly, adults and adolescents weighing less than 50kg

**Hepatotoxicity at therapeutic doses of paracetamol**

Cases of paracetamol induced hepatotoxicity, including fatal cases, have been reported in patients taking paracetamol at doses within the therapeutic range. These cases were reported in patients with one or more risk factors for hepatotoxicity including low body weight (<50 Kg), renal and hepatic impairment, chronic alcoholism, concomitant intake of hepatotoxic drugs and in acute and chronic malnutrition (low reserves of hepatic glutathione). Paracetamol should be administered with caution to patients with these risk factors. Caution is also advised in patients on concomitant treatment with drugs that induce hepatic enzymes and in conditions which may predispose to glutathione deficiency (see sections 4.2, 4.5 and 4.9).

Doses of paracetamol should be reviewed at clinically appropriate intervals and patients should be monitored for emergence of new risk factors for hepatotoxicity which may warrant dosage adjustment.

Cases of high anion gap metabolic acidosis (HAGMA) due to pyroglutamic acidosis have been reported in patients in patients with severe illnesses such as severe renal impairment and sepsis, or in patients with malnutrition and other sources of glutathione deficiency (e.g. chronic alcoholism), who were treated with paracetamol at a therapeutic dose for a prolonged period or a combination of paracetamol and flucoxacin. If HAGMA due to pyroglutamic acidosis is suspected, prompt discontinuation of paracetamol and close monitoring, is recommended. The measurement of urinary 5-oxoproline may be useful to identify pyroglutamic acidosis as underlying cause of HAGMA in patients with multiple risk factors.

Sympathomimetic-containing products may act as cerebral stimulants giving rise to insomnia, nervousness, hyperpyrexia, tremor and epileptiform convulsions.

This product should not be used by patients taking other sympathomimetics (such as decongestants, appetite suppressants and amphetamine-like psychostimulants).

Prolonged use of any type of painkiller for headaches can make them worse. If this situation is experienced or suspected, medical advice should be obtained and treatment should be discontinued. The diagnosis of medication overuse headache should be suspected in patients who have frequent or daily headaches despite (or because of) the regular use of headache medications.

Patients should be advised not to take other paracetamol-containing products, decongestants or cold and flu medicines concurrently. Immediate medical advice should be sought in the event of overdose even if the patient feels well because the risk of irreversible liver damage (see section 4.9).

Patients suffering from chronic cough or asthma should consult a physician before taking this product. Patients should stop using the product and consult a health care professional if cough lasts for more than 3 days or comes back, or is accompanied by a fever, rash or persistent headache.

Precaution should be observed in patients with asthma who are sensitive to acetylsalicylic acid, since mild bronchospasms are reported in association with paracetamol (cross reaction).

This medicine contains less than 1 mmol sodium (23 mg) per 2 capsules, that is to say essentially 'sodium-free'.

**4.5 Interaction with other medicinal products and other forms of interaction****PARACETAMOL**

The speed of absorption of paracetamol may be increased by metoclopramide or domperidone and absorption reduced by colestyramine.

The anticoagulant effect of warfarin and other coumarins may be enhanced by prolonged regular use of paracetamol with increased risk of bleeding, although occasional doses have no significant effect.

Paracetamol is metabolized in the liver and can therefore interact with other medicines that follow the same pathway or may inhibit or induce this route. Drugs which induce hepatic microsomal enzymes, such as alcohol, barbiturates, monoamine oxidase inhibitors and tricyclic antidepressants, may increase the hepatotoxicity of paracetamol particularly in overdose (see Section 4.9). Contraindicated in patients currently receiving or within two weeks of stopping therapy with monoamine oxidase inhibitors because of a risk of hypertensive crisis (see Section 4.3)..

In case of concomitant treatment with probenecid, the dose of paracetamol should be reduced since probenecid reduces the clearance of paracetamol by 50% since it prevents the conjugation of paracetamol with glucuronic acid.

There is limited evidence suggesting that paracetamol may affect chloramphenicol pharmacokinetics but its validity has been criticised and evidence of a clinically relevant interaction appears to lack. Although no routine monitoring is needed, it is important to bear in mind this potential interaction when these two medications are concomitantly administered, especially in malnourished patients.

Caution should be taken when paracetamol is used concomitantly with flucloxacillin as concurrent intake has been associated with high anion gap metabolic acidosis, due to pyroglutamic acidosis, especially in patients with risks factors (see section 4.4).

### GUAIFENESIN

If urine is collected within 24 hours of a dose of this product a metabolite of guaifenesin may cause a colour interference with laboratory determinations of urinary-5-hydroxyindolacetic acid (5-HIAA) and vanillylmandelic acid (VMA).

### PHENYLEPHRINEHYDROCHLORIDE

Phenylephrine may adversely interact with other sympathomimetics, vasodilators and beta blockers.

Concomitant use of phenylephrine with other sympathomimetic amines can increase the risk of cardiovascular side effects.

Hypertensive interactions occur between sympathomimetic amines such as phenylephrine and monoamine oxidase inhibitors (see Section 4.3).

Sympathomimetic-containing products should be used with great care in patients receiving phenothiazines or tricyclic antidepressants. May increase the risk of cardiovascular side effects with phenylephrine. (See Section 4.3).

Phenylephrine should be used with caution in combination with Ergot alkaloids (ergotamine and methysergide), increase risk of ergotism.

Sympathomimetic-containing products should be used with caution in patients receiving digitalis (digoxin and cardiac glycosides), beta-adrenergic blockers, guanethidine, reserpine, debrisoquine, methyldopa or anti-hypertensive agents. (See Section 4.3).

Phenylephrine may reduce the efficacy of beta-blocking drugs and antihypertensive drugs. The risk of hypertension and other cardiovascular side effects may be increased. (See section 4.3).

Concurrent use with halogenated anesthetic agents such as chloroform, cyclopropane, halothane, enflurane or isoflurane may provoke or worsen ventricular arrhythmias.

This medicine should not be used with enzyme inducers such as alcohol.

## **4.6 Fertility, pregnancy and lactation**

### **Pregnancy**

This product is contraindicated during pregnancy.

Based on human experience, phenylephrine hydrochloride causes congenital malformation when administered during pregnancy. It has also been shown to have possible associations with foetal hypoxia.

A large amount of data on pregnant women indicate no malformative nor feto/neonatal toxicity of paracetamol. Epidemiological studies on neurodevelopment in children exposed to paracetamol in utero show inconclusive results.

There are no data from the use of guaifenesin in pregnant women.

### **Lactation**

Paracetamol and phenylephrine may be excreted in breast milk. It is not known whether guaifenesin is excreted in breast milk.

This product should not be used whilst breastfeeding without medical advice.

### **Fertility**

There are no available human data regarding the influence of this product on fertility.

## **4.7 Effects on ability to drive and use machines**

Patients should be advised not to drive or operate machinery if affected by dizziness.

## **4.8 Undesirable effects**

Adverse events from historical clinical trial data are both infrequent and from small patient exposure. Events reported from extensive post-marketing experience at therapeutic/labelled dose and considered attributable are tabulated below by MedDRA System Organ Class and frequency.

The following convention has been utilised for the classification of undesirable effects: very common ( $\geq 1/10$ ), common ( $\geq 1/100$ ,  $< 1/10$ ), uncommon ( $\geq 1/1,000$ ,  $< 1/100$ ), rare ( $\geq 1/10,000$ ,  $< 1/1,000$ ), very rare ( $< 1/10,000$ ), not known (cannot be estimated from available data)

### **PARACETAMOL**

| <b>System Organ Class</b>                       | <b>Undesirable effect</b>  | <b>Frequency</b> |
|---|--|------------------|
| Blood and lymphatic system disorders            | Thrombocytopenia, agranulocytosis, leukopenia, pancytopenia, neutropenia   | Very rare        |
| Immune system disorders                         | Anaphylaxis and allergic/hypersensitivity reactions  | Rare             |
| Immune system disorders                         | Allergies (not including angioedema).  | Not known        |
| Respiratory, thoracic and mediastinal disorders | Bronchospasm in patients sensitive to acetylsalicylic acid and other NSAIDs  | Very rare        |
| Hepatobiliary disorders                         | Hepatic dysfunction  | Very rare        |
| Skin and subcutaneous tissue disorders          | Cutaneous hypersensitivity reactions including skin rashes, pruritis, sweating, purpura, urticaria, and angioedema. Toxic epidermal necrolysis (TEN), drug induced dermatitis, Stevens Johnson syndrome (SJS), Acute generalised exanthematous pustulosis (AGEP) | Very rare        |
| Renal and urinary disorders                     | Sterile pyuria (cloudy urine)  | Very rare        |
| Gastrointestinal disorders                      | Acute pancreatitis   | Not known        |
| Metabolism and nutrition disorders              | High anion gap metabolic acidosis.   | Not known        |

### **GUAIFENESIN**

| <b>System Organ Class</b>                       | <b>Undesirable effect</b>                                | <b>Frequency</b> |
|---|--|------------------|
| Immune system disorders                         | Allergic reactions, angioedema, anaphylactic reactions   | Rare             |
| Respiratory, thoracic and mediastinal disorders | Dyspnoea (reported in association with other symptoms of | Rare             |

|                                 |   |      |
|---------------------------------|---|------|
|                                 | hypersensitivity)                         |      |
| Gastrointestinal disorders      | Nausea, vomiting, abdominal discomfort    | Rare |
| Skin and subcutaneous disorders | Allergic reactions (e.g. rash, urticaria) | Rare |

**PHENYLEPHRINE HYDROCHLORIDE**

| <b>System Organ Class</b>       | <b>Undesirable effect</b>   | <b>Frequency</b> |
|---------------------------------|---|------------------|
| Immune system disorders         | Hypersensitivity, urticaria, allergic dermatitis  | Not known        |
| Psychiatric disorders           | Nervousness, irritability, restlessness, excitability, insomnia   | Not known        |
| Nervous system disorders        | Headache, dizziness   | Not known        |
| Eye disorders                   | Mydriasis, acute angle glaucoma, most likely to occur in those with closed angle glaucoma   | Rare             |
| Cardiac disorders               | Increased blood pressure, Tachycardia, palpitations, reflex bradycardia, cardiac arrhythmias  | Rare             |
| Gastrointestinal disorders      | Vomiting, diarrhoea, nausea   | Not known        |
| Skin and subcutaneous disorders | Allergic reactions, tingling and coolness of the skin, rash<br>Cutaneous hypersensitivity reactions including skin rashes, angioedema, and Stevens Johnson syndrome, toxic epidermal necrolysis.<br>Pruritus, sweating, purpura and urticaria.<br>Drug-induced dermatitis, Acute generalized exanthematous pustulosis (AGEP). | Not known        |
| Renal and urinary disorders     | Dysuria, urinary retention, most likely to occur in those with bladder outlet obstruction, such as prostatic hypertrophy.   | Not known        |
| Investigations                  | Increased Blood Pressure  | Rare             |

**Description of selected adverse reactions**

High anion gap metabolic acidosis

Cases of high anion gap metabolic acidosis due to pyroglutamic acidosis have been observed in patients with risk factors using paracetamol (see section 4.4). Pyroglutamic acidosis may occur as a consequence of low glutathione levels in these patients.

**Reporting of suspected adverse reactions**

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions directly via HPRA Pharmacovigilance, Earlsfort Terrace, IRL - Dublin 2; Tel: +353 1 6764971; Fax: +353 1 6762517. Website: [www.hpra.ie](http://www.hpra.ie); E-mail: [medsafety@hpra.ie](mailto:medsafety@hpra.ie).

**4.9 Overdose****PARACETAMOL**

There is a risk of poisoning, particularly in elderly subjects, in young children, in patients with liver disease, in cases of chronic alcoholism, in patients with chronic malnutrition. Overdosing may be fatal in these cases. Symptoms generally appear within the first 24 hours and comprise: nausea, vomiting, anorexia, pallor, and abdominal pain.

Overdose of paracetamol in a single administration in adults or in children causes liver cell necrosis likely to induce complete and irreversible necrosis, resulting in hepatocellular insufficiency, metabolic acidosis and encephalopathy which may lead to coma and death. Simultaneously, increased levels of hepatic transaminases (AST, ALT), lactate dehydrogenase and bilirubin are observed together with increased prothrombin levels that may appear 12 to 48 hours after administration.

Liver damage is likely in adults who have taken more than the recommended amounts of paracetamol. It is considered that excess quantities of toxic metabolite (usually adequately detoxified by glutathione when normal doses of paracetamol are ingested), become irreversibly bound to liver tissue.

Some patients may be at increased risk of liver damage from paracetamol toxicity.

**RiskFactors**

If the patient

a) is on long term treatment with carbamazepine, phenobarbital, phenytoin, primidone, rifampicin, St John's Wort or other drugs that induce liver enzymes.

**or**

b) Regularly consumes ethanol in excess of recommended amounts.

**or**

c) Is likely to be glutathione deplete e.g. eating disorders, cystic fibrosis, HIV infection, starvation, cachexia.

### Symptoms

Symptoms of paracetamol overdose in the first 24 hours are pallor, nausea, vomiting, anorexia and abdominal pain. Liver damage may become apparent 12 to 48 hours after ingestion. Abnormalities of glucose metabolism and metabolic acidosis may occur. In severe poisoning, hepatic failure may progress to encephalopathy, haemorrhage, hypoglycaemia, cerebral oedema, and death. Acute renal failure with acute tubular necrosis, strongly suggested by loin pain, haematuria and proteinuria, may develop even in the absence of severe liver damage. Cardiac arrhythmias and pancreatitis have been reported.

### Management

Immediate treatment is essential in the management of paracetamol overdose. Despite a lack of significant early symptoms, patients should be referred to hospital urgently for immediate medical attention. Symptoms may be limited to nausea or vomiting and may not reflect the severity of overdose or the risk of organ damage. Management should be in accordance with established treatment guidelines, see British National Formulary (BNF) overdose section.

Treatment with activated charcoal should be considered if the overdose has been taken within one hour. Plasma paracetamol concentration should be measured at four hours or later after ingestion (earlier concentrations are unreliable). Treatment with N-acetylcysteine, may be used up to 24 hours after ingestion of paracetamol, however, the maximum protective effect is obtained up to eight hours post-ingestion.

The effectiveness of the antidote declines sharply after this time. If required the patient should be given intravenous N-acetylcysteine, in line with the established dosage schedule. If vomiting is not a problem, oral methionine may be a suitable alternative for remote areas, outside hospital. Management of patients who present with serious hepatic dysfunction beyond 24 hours from ingestion should be discussed with the National Poisons Information Service (NPIS) or a liver unit.

### GUAIFENESIN

#### Symptoms

Gastrointestinal discomfort has occasionally been reported with Guaifenesin. Very large doses of guaifenesin can cause nausea and vomiting. When taken in excess, guaifenesin may cause renal calculi.

#### Management

Vomiting should be treated by fluid replacement and monitoring of electrolytes. Renal calculi should be treated according to established treatment guidelines for urolithiasis.

### PHENYLEPHRINEHYDROCHLORIDE

#### Symptoms

Phenylephrine hydrochloride may elevate blood pressure with headache, vomiting and rarely palpitations, tachycardia or reflex bradycardia, tingling and coolness of the skin. There have been rare reports of allergic reactions.

Symptoms of overdosage include irritability, palpitations, hypertension, difficulty in micturition, nausea, vomiting, thirst and convulsions.

Severe overdosage of phenylephrine may produce hypertension and associated reflex bradycardia, haemodynamic changes and cardiovascular collapse with respiratory depression.

## Management

Treatment measures include early gastric lavage and symptomatic and supportive measures. The hypertensive effects may be treated with an alpha- receptor blocking agent (such as phentolamine mesylate 6 – 10 mg) given intravenously, and the bradycardia treated with atropine, preferably only after the pressure has been controlled. In severe overdosage gastric lavage and aspiration should be performed. Symptomatic and supportive measures should be undertaken, particularly with regard to cardiovascular and respiratory systems. Convulsions should be controlled with intravenous diazepam. Chlorpromazine may be used to control marked excitement and hallucinations. Severe hypertension may need to be treated with an alpha-adrenoreceptor blocking drug, such as phentolamine. A beta blocker may be required to control cardiac arrhythmias.

Phenylephrine overdosage is likely to result in effects similar to those listed under adverse reactions. In severe cases confusion, hallucinations, seizures and arrhythmias may occur. However the amount required to produce serious phenylephrine toxicity would be greater than required to cause paracetamol related toxicity.

## 5 PHARMACOLOGICAL PROPERTIES

### 5.1 Pharmacodynamic properties

Pharmacotherapeutic Group: Other analgesics and antipyretics & Other cold combination preparations

ATC code: N02BE51

#### Mechanism of action

##### PARACETAMOL

##### Analgesic:

The mechanism of analgesic action has not been fully determined. Paracetamol may act predominantly by inhibiting a prostaglandin synthesis in the central nervous system (CNS) and to a lesser extent through a peripheral action by blocking pain- impulse generation. The peripheral action may also be due to inhibition of prostaglandin synthesis or to inhibition of the synthesis or actions of other substances that sensitise pain receptors to mechanical or chemical stimulation.

##### Antipyretic:

Paracetamol probably produces antipyresis by acting on the hypothalamic heat- regulating centre to produce peripheral vasodilation resulting in increased blood flow through the skin, sweating and heat loss. The central action probably involves inhibition of prostaglandin synthesis in the hypothalamus.

##### GUAIFENESIN

Guaifenesin is a well known expectorant. Such expectorants are known to increase the volume of secretions in the respiratory tract and therefore to facilitate their removal by ciliary action and coughing.

##### PHENYLEPHRINE HYDROCHLORIDE

Sympathomimetic amines, such as phenylephrine, act on alpha-adrenergic receptors of the respiratory tract to produce vasoconstriction, which temporarily reduces the swelling associated with inflammation of the mucous membranes lining the nasal and sinus passages. This allows the free drainage of the sinusoidal fluid from the sinuses.

In addition to reducing mucosal lining swelling, decongestants also suppress the production of mucous, therefore preventing a build up of fluid within the cavities which could otherwise lead to pressure and pain.

### 5.2 Pharmacokinetic properties



**PARACETAMOL****Absorption:**

Paracetamol is rapidly absorbed from the gastro-intestinal tract with peak plasma concentrations occurring between 10 and 120 minutes after oral administration.

**Distribution**

Paracetamol is relatively uniformly distributed throughout most bodily fluids and exhibits variable protein binding. Plasma-protein binding is negligible at usual therapeutic concentrations but increases with increasing concentrations

**Biotransformation:**

Paracetamol is metabolised in the liver following two major metabolic pathways, with formation of glucuronic acid and sulfuric acid conjugates. The latter route is rapidly saturated at doses higher than the therapeutic dosages. A minor route, catalysed by the Cytochrome P 450 (mostly CYP2E1), results in the formation of an intermediate reagent (N-acetyl-p-benzoquinoneimine) which, under normal conditions of use, is rapidly detoxified by glutathione and eliminated in the urine after conjugation with cysteine and mercapturic acid. Conversely, when massive intoxication occurs, the quantity of this toxic metabolite is increased.

**Elimination:**

Paracetamol is mostly excreted in the urine. Ninety percent of the ingested dose is eliminated via the kidneys within 24 hours as the glucuronide (60-80%) and sulphate conjugates (20-30%). Less than 5% is excreted as unchanged paracetamol. The elimination half-life varies from about 1 to 4 hours.

In cases of renal failure ( $GFR \leq 50 \text{ ml/min}$ ), the elimination of paracetamol is slightly delayed, with the elimination half-life ranging from 2 to 5.3 hours. For the glucuronide and sulfate conjugates, the elimination rate is 3 times slower in subjects with severe renal impairment than in healthy subjects.

**GUAIFENESIN****Absorption:**

Guaifenesin is absorbed in the gastrointestinal tract after oral administration.

**Metabolism and elimination:**

Guaifenesin is rapidly metabolised by the liver by oxidation to b-(2 methoxy-phenoxy) lactic acid, which is excreted in the urine.

**PHENYLEPHRINE HYDROCHLORIDE****Absorption:**

Phenylephrine hydrochloride is irregularly absorbed from the gastrointestinal tract. Peak plasma levels occur within 2 hours.

**Metabolism:**

Phenylephrine hydrochloride undergoes first-pass metabolism by monoamine oxidase in the gut and liver. Therefore orally administered phenylephrine has reduced bioavailability.

**Elimination:**

Phenylephrine hydrochloride is excreted in the urine almost entirely as the sulphate conjugate.

**5.3 Preclinical safety data**

There are no preclinical data of relevance to the prescriber additional to that already covered in other sections of the SPC. For paracetamol, conventional studies using the currently accepted standards for the evaluation of toxicity to reproduction and development are not available.

**6 PHARMACEUTICAL PARTICULARS****6.1 List of excipients**

Maize starch  
Croscarmellose sodium  
Sodium laurilsulfate  
Magnesium stearate  
Talc

Gelatin capsule:

Gelatin  
Quinoline yellow E104  
Indigo carmine E132  
Erythrosine E127  
Titanium dioxide E171

## **6.2 Incompatibilities**

None known.

## **6.3 Shelf life**

36 months

## **6.4 Special precautions for storage**

Do not store above 25°C

## **6.5 Nature and contents of container**

Child Resistant blister comprising 250 micron PVC lidded with 35 gsm paper/9 micron aluminium foil.

Pack sizes of 8 and 16 capsules are available.

## **6.6 Special precautions for disposal**

None.

## **7 MARKETING AUTHORISATION HOLDER**

Chefaro Ireland DAC  
The Sharp Building  
Hogan Place  
Dublin 2  
Ireland

## **8 MARKETING AUTHORISATION NUMBER**

PA1186/021/002

## **9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of first authorisation: 20<sup>th</sup> February 2009

Date of last renewal: 20<sup>th</sup> January 2014

## **10 DATE OF REVISION OF THE TEXT**

March 2025