Summary of Product Characteristics

1 NAME OF THE MEDICINAL PRODUCT

Solpa Cold & Flu Multi-Relief Max Powder for Oral Solution Paracetamol 1000 mg, Guaifenesin 200 mg, Phenylephrine hydrochloride 12.2 mg

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Active Ingredient	**mg/Sachet**
Paracetamol	1000
Guaifenesin	200
Phenylephrine hydrochloride	12.2 (corresponding to 10 mg phenylephrine base)

Excipients with known effects
Each sachet contains:
Sucrose 2000mg
Aspartame (E951) 30mg
Sodium 117mg

For a full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Powder for oral solution.

Sachets 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 Max Powder for Oral Solution 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:
One sachet every 4 to 6 hours when necessary to a maximum of 4 doses in 24 hours.

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.
Dissolve the contents of one sachet in a standard mug of hot, but not boiling water (250 ml).
Allow to cool to a drinkable temperature.

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 paracetamol, guaifenesin or phenylephrine or any of the other ingredients.
•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.
•Phaeochromocytoma
•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 hepaticenzymes 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 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 flucoxacillin. 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. Immediate medical advice should be sought in the event of overdosage 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. Do not take with a cough suppressant. If symptoms persist consult your doctor. 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 2000mg of sucrose per sachet. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine. This should be taken into account in patients with diabetes mellitus. May be harmful to the teeth.

This medicine contains 30mg Aspartame (E951) per sachet. Aspartame is a source of phenylalanine. It may be harmful if you have phenylketonuria (PKU), a rare
genetic disorder in which phenylalanine builds up because the body cannot remove it properly.

This medicinal product contains 117 mg of sodium per dose, equivalent to 6% of the WHO recommended maximum daily intake of 2 g sodium for an adult. The maximum daily dose of this product is equivalent to 23.4% of the WHO recommended maximum daily intake for sodium. This medicine is considered high in sodium. To be taken into consideration by patients on a controlled sodium diet.

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.

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).

PHENYLEPHRINE HYDROCHLORIDE

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.

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

Sympathomimetic-containing products should be used with great care in patients receiving phenothiazines or tricylic antidepressants.

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

Concurrent use with halogenated anaesthetic 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.

Medical advice should be sought before taking this medicine in combination with the following drugs.
Digoxin and cardiac glycosides: Concomitant use of phenylephrine may increase the risk of irregular heartbeat or heart attack.

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 (≥1/10), common (≥1/100, <1/10), uncommon (≥1/1,000, <1/100), rare (≥1/10,000, <1/1,000), very rare (<1/10,000), not known (cannot be estimated from available data).

PARACETAMOL

System Organ Class	Undesirable effect	Frequency
Blood and lymphatic system disorders	Thrombocytopenia, agranulocytosis	Very rare
Immune system disorders	Anaphylaxis and allergic/hypersensitivity reactions	Rare
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. Very rare cases of serious skin reactions have been reported. 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

System Organ Class	Undesirable effect	Frequency
Immune system disorders	Allergic reactions, angioedema, anaphylactic reactions	Rare
Respiratory, thoracic and mediastinal disorders	Dyspnoea (reported in association with other symptoms of hypersensitivity)	Rare
Gastrointestinal disorders	Nausea, vomiting, abdominal discomfort	Rare
Skin and subcutaneous disorders	Allergic reactions (e.g. rash, urticaria)	Rare

PHENYLEPHRINE HYDROCHLORIDE

System Organ Class	Undesirable effect	Frequency
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	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 Cutaneous hypersensitivity reactions including skin rashes, angioedema, and Stevens Johnson syndrome, toxic epidermal necrolysis. Pruritus, sweating, purpura and urticaria. 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; E-mail: 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.

Risk Factors
If the patient

1. is on long term treatment with carbamazepine, phenobarbital, phenytoin, primidone, rifampicin, St John's Wort or other drugs that induce liver enzymes. **or**
2. Regularly consumes ethanol in excess of recommended amounts. **or**
3. Is likely to be glutathione deplete e.g. eating disorders, cystic fibrosis, HIV infection, starvation, cachexia.

Symptoms

Symptoms of paracetamol overdosage 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 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 if indicated.

Treatment of renal calculi should be done according to scientific guidelines for urolithiasis.

PHENYLEPHRINE HYDROCHLORIDE

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: Analgesics, Anilides, paracetamol combinations excluding psycholeptics.
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 cilary 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≤50ml/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 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

Sucrose
Citric acid
Tartaric acid
Sodium citrate
Acesulfame potassium E950
Aspartame E951
Powdered menthol flavour
Lemon flavour
Quinoline yellow E104

6.2 Incompatibilities

None known

6.3 Shelf life

24 months in Low density polyethylene 30 gm^{-2}/aluminiumfoil 15 micron/lowdensity polyethylene 12 gm^{-2}/paper 40 gm^{-2} (outer layer).
36 months in 'Surlyn' 25 gm^{-2}(product contact layer)/aluminiumfoil 12 microns/lowdensity polyethylene 12 gm^{-2}/bleachedpaper 40 gm^{-2}(outer layer).

36 months in 'Surlyn' 25 gm^{-2}(product contact layer)/aluminium foil 15 microns/low density polyethylene 12 gm^{-2} /bleached paper 45 gm^{-2} (outer layer).

6.4 Special precautions for storage

Do not store above 25°C.

6.5 Nature and contents of container

Pack sizes of five and ten sachets are available. The sachet laminate comprises either:
Low density polyethylene 30 gm^{-2}/aluminium foil 15 micron/lowdensity polythylene 12 gm^{-2}/paper 40 gm^{-2}(outer layer).

or

'Surlyn'25 gm^{-2}(product contact layer)/aluminiumfoil 12 microns/lowdensity polyethylene 12 gm^{-2} /bleachedpaper 40 gm^{-2} (outer layer).
Or
'Surlyn' 25 gm^{-2}(product contact layer)/aluminium foil 15 microns/low density polyethylene 12 gm^{-2} /bleached paper 45 gm^{-2} (outer layer).

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

PA1186/021/003

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 22nd December 2009
Date of last renewal: 4th July 2014

10 DATE OF REVISION OF THE TEXT

March 2025