Module 1.3.1 Professional Information (PI) – Approved

SCHEDULING STATUS: S2

1 NAME OF THE MEDICINE

DIPHAL EXPECTORANT (Solution)

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 5 mL contains:

Diphenhydramine hydrochloride	14 mg
Ammonium chloride	136 mg
Preservative: Nipastat	0,02 % *m/v*

Contains sugar (sucrose) 1 300 mg per 5 mL

For a full list of excipients, see section 6.1

3 PHARMACEUTICAL FORM

Solutions.

A clear brown syrupy liquid.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

DIPHAL EXPECTORANT is indicated for the alleviation of cough in adults and children 6 years and older.

4.2 Posology and method of administration

A maximum of four doses per day should not be exceeded.

Shake the bottle before use.

Adults: one to two medicine measures (5 to 10 mL) every three to four hours.

Children 6 to 12 years: half to one medicine measure (2,5 to 5 mL) every four hours.

Paediatric population: The safety in children under 6 years has not been established (see section 4.3).

4.3 Contraindications

- Hypersensitivity to diphenhydramine hydrochloride, ammonium chloride or any of the ingredients of DIPHAL EXPECTORANT.
- DIPHAL EXPECTORANT is contra-indicated in the presence of impaired hepatic or renal function, and in patients with asthma and COPD (see section 4.4).
- DIPHAL EXPECTORANT should not be used with monoamine oxidase inhibitors including linezolid or within 14 days of stopping monoamine oxidase inhibitor including linezolid treatment (see section 4.4 and section 4.5).
- DIPHAL EXPECTORANT should not be used in children under the age of 6 years.

4.4 Special warnings and precautions for use

The use of DIPHAL EXPECTORANT solution leads to drowsiness and impaired concentration which is aggravated by the simultaneous intake of alcohol.

DIPHAL EXPECTORANT should be used cautiously in:

- patients with cardiac failure, hypertension, peripheral and pulmonary oedema and toxaemia of pregnancy.
- patients with cardiovascular disease, glaucoma, prostatic hypertrophy and patients with urinary retention.

- elderly patients are most susceptible to the central nervous system depressant and hypotensive effects.

The positive results of skin allergy tests may be suppressed.

Extreme caution should be exercised with patients taking DIPHAL EXPECTORANT in conjunction with nervous system depressants such as alcohol, barbiturates, hypnotics, narcotics analgesic sedatives and tranquillisers and anticholinergic medicines and tricyclic antidepressants as their effects may be enhanced by diphenhydramine.

Monoamine-oxidase inhibitors may enhance the anticholinergic effects of diphenhydramine hydrochloride.

The warning signs of damage caused by ototoxic medicines such as aminoglycosides may be masked by diphenhydramine hydrochloride.

- DIPHAL EXPECTORANT should not be taken for a persistent cough that occurs with smoking, asthma or emphysema.

Children who take DIPHAL EXPECTORANT may experience paradoxical hyperexcitability, nervousness, irritability or insomnia.

DIPHAL EXPECTORANT contains sucrose. Patient with rare hereditary conditions such as fructose intolerance, glucose-galactose mal-absorption or sucrose-isomaltase insufficiency should not take DIPHAL EXPECTORANT.

DIPHAL EXPECTORANT contains sucrose which may have an effect on the glycaemic control of patients with diabetes mellitus.

DIPHAL EXPECTORANT contains less than 1 mmol sodium (23 mg) per 5 mL, that is to say essentially “sodium-free”.

DIPHAL EXPECTORANT contains 20 mg propylene glycol in each 5 mL solution. If you suffer from a liver or kidney disease, do not take this medicine unless recommended by your doctor. Your doctor may carry out extra checks while you are taking this medicine.

4.5 Interaction with other medicines and other forms of interaction

- DIPHAL EXPECTORANT may enhance the sedative effects of CNS depressants including alcohol, barbiturates, hypnotics, opioid analgesics, anxiolytic sedatives and antipsycotics.
- DIPHAL EXPECTORANT should not be used simultaneously with monoamine oxidase inhibitors including linezolid (see section 4.3).
- Warning signs of damage caused by ototoxic medicines such as aminoglycoside antibiotics may be masked by DIPHAL EXPECTORANT (see section 4.4).
- DIPHAL EXPECTORANT may suppress the cutaneous histamine response to allergen extracts. The use of DIPHAL EXPECTORANT should be stopped at least 72 hours before testing begin.

4.6 Fertility, pregnancy and lactation

Pregnancy

Safety during pregnancy has not been established.

Lactation

Diphenhydramine crosses the placenta and is excreted into breast milk.

Mothers on DIPHAL EXPECTORANT should not breastfeed their infants.

4.7 Effects on ability to drive and use machines

The use of DIPHAL EXPECTORANT solution leads to drowsiness and impaired concentration and it is unsafe to drive a vehicle or be in charge of machinery while using DIPHAL EXPECTORANT, as impaired decision making could lead to accidents.

4.8 Undesirable effects

The following side effects are for diphenhydramine and ammonium chloride and the frequencies are estimated from spontaneous reporting rates.

Blood and lymphatic system disorders	
Less frequent:	Agranulocytosis, leucopenia, haemolytic anaemia and thrombocytopenia.
Immune system disorders	
Less frequent:	Angioedema, hypersensitivity, allergic reactions and anaphylaxis.
Metabolism and nutrition disorders	
Less frequent:	Increased appetite, anorexia.
Psychiatric disorders	
Less frequent:	Confusional state, irritability, hallucinations, euphoria and nervousness.
Nervous system disorders	
Frequent:	Sedation varying from slight drowsiness to deep sleep including lassitude, dizziness, and incoordination, headache and antimuscarinic effects, such as dry mouth and thickened respiratory tract secretions.
Less frequent:	Agitation, abnormal coordination, convulsions (large doses may precipitate fits in epileptics), headache, insomnia, paraesthesia, sedation, somnolence, deepening coma, extrapyramidal effects and tremor.
DIPHAL EXPECTORANT may act as a cerebral stimulant in infants and children. Symptoms of stimulation include insomnia, nervousness, tachycardia, tremors and convulsions. Elderly patients are more susceptible to central nervous system effects.	

Eye disorders	
Less frequent:	Blurred vision.
Ear and labyrinth disorders	
Less frequent:	Tinnitus.
Cardiac disorders	
Less frequent:	Palpitations and tachycardia.
Vascular disorders	
Less frequent:	Hypotension.
Elderly patients are more susceptible to hypotensive effects.	
Respiratory, thoracic and mediastinal disorders	
Less frequent:	Chest discomfort, chest tightness, dry throat and nasal dryness.
Gastrointestinal disorders	
Less frequent:	Abdominal pain, epigastric pain, application site reaction (burning sensation, glossitis, glossodynia, oral hypoaesthesia, lip blister, dry lip, lip pain, mouth ulceration, oral discomfort, oral disorder, erythema of oral mucosa, oropharyngeal blistering, stomatitis, tongue disorder, tongue eruption), dry mouth, diarrhoea, constipation, dyspepsia, nausea and vomiting.
Skin and subcutaneous tissue disorders	
Less frequent:	Pruritus, rash, photosensitisation and urticaria.

Musculoskeletal and connective tissue disorders	
Less frequent:	Muscular weakness.
Renal and urinary disorders	
Less frequent:	Urinary retention, dysuria, difficulty in micturition.
General disorders and administration site conditions	
Less frequent:	Asthaenia
Investigations	
Frequency unknown:	Suppression of positive skin test results.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Health care providers are requested to report any suspected adverse drug reactions to SAHPRA via the Med Safety APP (Medsafety X SAHPRA) and eReporting platform (who-umc.org) found on SAHPRA website.

4.9 Overdose

Symptoms of hypernatraemia may include restlessness, weakness, thirst, reduced salivation and lachrymation, swollen tongue, flushing of the skin, pyrexia, dizziness, headache, oliguria, hypotension, tachycardia, delirium, hyperpnoea and respiratory arrest. Other symptoms of overdosage are gastrointestinal upset, drowsiness, hypochloraemic acidosis and hypokalaemia.

Diphenhydramine hydrochloride:

Overdosage may be fatal, especially in children in whom main symptoms are central nervous system stimulation and antimuscarinic effects, including ataxia, excitement, hypotension, drowsiness, hallucinations, muscle tremor, convulsions, dilated pupils, dry mouth, flushed face and hyperpyrexia, respiratory collapse, death may occur from respiratory failure.

Treatment is symptomatic and supportive.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacological classification

Category and class: A 10.1 Antitussives and expectorants.

Pharmacotherapeutic group: Antihistamines for systemic use

ATC code: R06AA52

Pharmacological action

Diphenhydramine hydrochloride is an antihistamine with anticholinergic properties. Ammonium chloride is an expectorant.

5.2 Pharmacokinetic properties:

Diphenhydramine

Diphenhydramine is well absorbed from the gastrointestinal tract, although high first-pass metabolism appears to affect systemic availability. Peak plasma concentrations occur about 1 to 4 hours after oral doses. Diphenhydramine is widely distributed throughout the body, including the central nervous system. It crosses the placenta and has been detected in breast milk.

Diphenhydramine is highly bound to plasma proteins.

Metabolism is extensive.

Diphenhydramine is excreted mainly in the urine as metabolites; little is excreted as unchanged molecule. The elimination half-life has been reported to range from 2,4 to 9,3 hours.

Ammonium chloride

Ammonium chloride is absorbed from the gastrointestinal tract.

5.3 Preclinical safety data

There are no preclinical data identified that would suggest any adverse findings that would be relevant to humans.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Caramel 4800 (flavour)

Essence of raspberry No. 1 (flavour)

Invert syrup

Menthol (flavour)

Nipastat

Propylene glycol

Purified water

Sodium citrate

Sucrose

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

24 months

6.4 Special precautions for storage

Store in a cool place, at or below 25 °C. Protect from light.

6.5 Nature and contents of container

100 mL round amber PVC bottles with white LDPE screw on or snap-on caps, or

200 mL round amber PVC bottles with white LDPE snap-on caps.

6.6 Special precautions for disposal and other handling

No special requirements.

7 HOLDER OF CERTIFICATE OF REGISTRATION

MDI Healthcare CC

374 Anderson Street

Menlo Park, Pretoria, 0081

RSA

8 REGISTRATION NUMBER

46/10.1/0087

9 DATE OF FIRST AUTHORISATION / RENEWAL OF THE AUTHORIZATION

Date of registration: 25 March 2019

10 DATE OF REVISION OF THE TEXT

26 March 2025