1.17 Summary Product Characteristics (SPC)

1. Name of the medicinal product

Kofgon Expectorant Syrup (Diphenhydramine HCl, Chlorpheniramine Maleate, Ammonium Chloride, Sodium Citrate and Menthol Syrup.)

2. Qualitative and quantitative composition

Each 5.0ml contains

Diphenhydramine HCl BP 5.0mg,

Chlorpheniramine Maleate BP 2.0 mg,

Ammonium Chloride BP 50 mg,

Sodium Citrate BP 30.0 mg and

Menthol 0.25 mg Syrup.

Excipients ……..…. q.s.

Flavored syrupy base.

3. Pharmaceutical form

Oral syrup:

Red- coloured syrup with mixed-fruit flavour free from visible evidence of contamination.

4. Clinical particulars

4.1 Therapeutic indications

Diphenhydramine Hcl, Chlorpheniramine Maleate, Ammonium Chloride, Sodium Citrate & Menthol Syrup is a medicine that is used for the treatment of Cough Relief, Hypochloremia, Metabolic Alkalosis, Pain In Arthritis, Pain In Shoulder Joint, Pain In Tendons and other conditions. Chlorpheniramine is an antiallergic which relieves allergy symptoms like runny nose, watery eyes and sneezing. Ammonium chloride is an expectorant which works by decreasing the stickiness of airway secretions and helps in their removal from the airways. Sodium citrate is a mucolytic which thins and loosens mucus (phlegm), making it easier to cough out. Menthol is an organic compound which produces a sensation of coolness and relieves minor throat irritation.

4.2 Posology and method of administration

- Not to be used for children below 2 years of age without medical advice
- **Children between 2-5yrs** - ½ teaspoonful (2.5 ml)
- **Children between 6-12 yrs** -1 teaspoonful (5ml)

- **Over 12yrs and adults** -2 teaspoonful (10ml)

Dose to be taken every 4 hours. Not to exceed 12 teaspoonfuls in 24 hours.

Consult physician in case coughing persists for more than 4 days or if you have any medical condition or pregnancy or are breast feeding or taking other medication.

4.3 Contraindications

Contraindicated in patients having acute asthmatic attacks. Antihistamines aren't recommended for breast-feeding women because small amounts of drug appear in breast milk.

Use cautiously in elderly patients and patients with increased intraocular pressure, hyperthyroidism, CV or renal disease, hypertension, bronchial asthma, urine retention, prostatic hyperplasia, bladder neck obstruction, or stenosing peptic ulcers.

4.4 Special warnings and precautions for use

Do not use

- to make a child sleepy
- with any other product containing diphenhydramine, even one used on skin

Ask a doctor before use if the child has

- a breathing problem such as chronic bronchitis
- glaucoma
- a sodium-restricted diet

Ask a doctor or pharmacist before use if the child is taking sedatives or tranquilizers

When using this product

- marked drowsiness may occur
- sedatives and tranquilizers may increase drowsiness
- excitability may occur, especially in children

DO NOT USE to make your child sleepy.

DO NOT USE with any other product containing diphenhydramine, even one used on skin.

4.5 Interaction with other medicinal products and other forms of interaction

Kofgon Expectorant can interact with several other medications. It can also interact with certain supplements.

Kofgon Expectorant and other medications

	KOFGON EXPECTORANT SYRUP **(Diphenhydramine HCl, Chlorpheniramine Maleate, Ammonium Chloride, Sodium Citrate and Menthol Syrup.)**
	MODULE 1

Below is a list of medications that can interact with Kofgon Expectorant. This list doesn't contain all drugs that may interact with Kofgon Expectorant.

Different drug interactions can cause different effects. For instance, some can interfere with how well a drug works, while others can cause increased side effects.

If you take other medications, talk with your pharmacist before taking Kofgon Expectorant. Your pharmacist can help you avoid potential interactions.

Anticholinergic drugs

Anticholinergic drugs block the action of acetylcholine, a chemical that relays messages between cells in your body. Kofgon Expectorant also blocks acetylcholine. Because anticholinergic drugs and Kofgon Expectorant work in the same way, taking them together can increase the risk of side effects. Examples of these drugs include:

- fesoterodine (Toviaz)
- oxybutynin (Gelnique, Ditropan XL, Oxytrol)
- scopolamine (Transderm Scop)
- tolterodine (Detrol)

Medications that cause sleepiness

Many medications can cause sleepiness. Taking these drugs with Kofgon Expectorant can increase the risk of excessive sleepiness. Examples of these medications include:

Antihistamines, such as:

- brompheniramine
- chlorpheniramine (Chlor-Trimeton)
- doxylamine (Unisom)
- dimenhydrinate (Dramamine)
- hydroxyzine (Vistaril)

Antidepressant drugs, such as:

- citalopram (Celexa)
- escitalopram (Lexapro)
- fluoxetine (Prozac, Sarafem)
- paroxetine (Paxil)
- sertraline (Zoloft)
- amitriptyline

- desipramine (Norpramin)
- doxepin
- imipramine (Tofranil)
- nortriptyline (Pamelor)

Antipsychotic drugs, such as:

- haloperidol (Haldol)
- olanzapine (Zyprexa)
- quetiapine (Seroquel)
- risperidone (Risperdal)

Benzodiazepines, such as:

- alprazolam (Xanax)
- clonazepam (Klonopin)
- diazepam (Valium)
- lorazepam (Ativan)

Opioids, such as:

- codeine
- hydrocodone (Hysingla ER, Zohydro ER)
- oxycodone (OxyContin, Roxicodone)
- tramadol (ConZip, Ultram)

Sedative-hypnotic drugs, such as:

- ramelteon (Rozerem)
- zaleplon (Sonata)
- zolpidem (Ambien)

Kofgon Expectorant and herbs and supplements

Some herbs and supplements can cause sleepiness. Taking these with Kofgon Expectorant can increase the risk of excessive sleepiness. Examples of these supplements include:

- chamomile
- kava
- melatonin
- valerian

4.6 Fertility, pregnancy and lactation

Pregnancy

Kofgon Expectorant Syrup is highly unsafe to use during pregnancy. Seek your doctor's advice as studies on pregnant women and animals have shown significant harmful effects to the developing baby.

Animal models have failed to reveal evidence of impaired fertility or fetal harm at doses up to 5 times the human dose. There are no controlled data in human pregnancy. AU TGA pregnancy category A: Drugs which have been taken by a large number of pregnant women and women of childbearing age without any proven increase in the frequency of malformations or other direct or indirect harmful effects on the fetus having been observed. US FDA pregnancy category B: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women.

Use is recommended only if clearly needed and the benefit outweighs the risk.

AU TGA pregnancy category: A

US FDA pregnancy category: B

Comment:

-Exposure during the third trimester may result in adverse reactions in premature infants and neonates.

Breastfeeding

Use is not recommended.

-According to some authorities: Use is contraindicated.

Excreted into human milk: Yes

Comments:

-The effects in the nursing infant are unknown.

-This drug may affect milk production, especially at high doses given early in the postpartum period and/or when used concomitantly with a sympathomimetic drug.

4.7 Effects on ability to drive and use machines

None known.

4.8 Undesirable effects

Most side effects do not require any medical attention and disappear as your body adjusts to the medicine. Consult your doctor if they persist or if you’re worried about them

Common side effects of Kofgon Expectorant

- Stomach pain/epigastric pain
- Dizziness
- Sleepiness
- Impaired coordination
- Thickened respiratory tract secretions
- Allergic reaction

General

The most commonly reported side effects included somnolence, dizziness, and incoordination.[Ref]

Nervous system

Common (1% to 10%): Sedation/somnolence/sleepiness, drowsiness, unsteadiness, dizziness, **headache**, attention disturbance

Rare (0.01% to 0.1%): Extrapyramidal effects, tremor, convulsions

Frequency not reported: Paresthesia, dyskinesia/muscle dyskinesia, **vertigo**, **neuritis**, incoordination, psychomotor impairment, activation of epileptogenic foci[Ref]

Drowsiness usually diminishes after a few days.[Ref]

Gastrointestinal

Common (1% to 10%): Dry mouth

Frequency not reported: Gastrointestinal disturbance, **nausea**, **vomiting**, **constipation**, **diarrhea**, **dyspepsia**, epigastric distress[Ref]

Other

Common (1% to 10%): Fatigue

Frequency not reported: Lassitude, **tinnitus**, acute labyrinthitis, asthenia, chills, impaired performance (including impaired driving, work, and/or information processing)[Ref]

Psychiatric

Rare (0.01% to 0.1%): Confusion, **depression**, sleep disturbances

Frequency not reported: Paradoxical excitation/excitation, agitation, increased energy, restlessness, nervousness, euphoria, **anxiety**, hallucinations, **insomnia**, irritability[Ref]

Cardiovascular

Rare (0.01% to 0.1%): **Palpitations**, **hypotension**, **arrhythmia**

Frequency not reported: **Tachycardia**, chest tightness, extrasystoles[Ref]

Hematologic

Rare (0.01% to 0.1%): Blood disorders

Frequency not reported: **Hemolytic anemia**, **thrombocytopenia**, **agranulocytosis**[Ref]

Hypersensitivity

Rare (0.01% to 0.1%): Hypersensitivity reactions

Frequency not reported: **Angioedema**, **anaphylactic shock**[Ref]

Hepatic

Rare (0.01% to 0.1%): Liver dysfunction[Ref]

Dermatologic

Frequency not reported: Rash, **urticaria**, skin rashes, **erythema**, photosensitivity, **pruritus**, drug rash, excessive perspiration[Ref]

Respiratory

Frequency not reported: **Dyspnea**, thickening of bronchial secretions, throat tightening, wheezing, nasal stuffiness, dry nose or throat[Ref]

Genitourinary

Frequency not reported: Urinary hesitancy/difficulty/retention, **dysuria**, early menses[Ref]

Ocular

Frequency not reported: Blurred vision, dry eyes, diplopia[Ref]

Metabolic

Frequency not reported: Increased appetite, anorexia[Ref]

Musculoskeletal

Frequency not reported: **Muscle twitching**/weakness

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 via the Yellow Card Scheme at www.mhra.gov.uk/yellowcard or search for MHRA yellow Card in the Google play or apple app store .

4.9 Overdose

Symptoms of an overdose in adults and children can include:

- involuntary movements

- blurred vision
- decreased sweating
- restlessness
- nervousness and anxiety
- confusion
- hallucinations
- heart arrhythmia
- trouble breathing
- seizure
- coma
- death

What to do in case of overdose

If you think you've taken too much of this drug, call your doctor or seek guidance from the American Association of Poison Control Centers at 800-222-1222 or through their online tool. **But if your symptoms are severe, call 911 or go to the nearest emergency room right away.**

5. Pharmacological properties

5.1 Pharmacodynamics properties

Diphenhydramine is a first generation **antihistamine** and ethanolamine with sedative and anti-allergic properties. **Diphenhydramine** competitively inhibits the histamine-1 (H1) receptor, thereby alleviating the symptoms caused by endogenous histamine on bronchial, capillary and gastrointestinal smooth muscles.

Chlopheniramine maleate - Antihistamines compete with histamine for H_1-receptor sites on smooth muscle of the bronchi, GI tract, uterus, and large blood vessels; they bind to cellular receptors, preventing access of histamine, thereby suppressing histamine-induced allergic symptoms. They don't directly alter histamine or its release.

5.2 Pharmacokinetic properties

Distribution

V_d: Children: 22 L/kg (range: 15 to 28 L/kg); Adults: 17 L/kg (range: 13 to 20 L/kg); Elderly: 14 L/kg (range: 7 to 20 L/kg) (Blyden 1986; Simons 1990)

Metabolism

Extensively hepatic n-demethylation via CYP2D6; minor demethylation via CYP1A2, 2C9 and 2C19; smaller degrees in pulmonary and renal systems; significant first-pass effect (Akutsu 2007)

Excretion

Urine (as metabolites and unchanged drug) (Albert 1975; Maurer 1988)

Time to Peak

Serum: ~2 hours (Blyden 1986; Simons 1990)

Duration of Action

Histamine-induced wheal suppression: ≤10 hours (Simons 1990)

Histamine-induced flare suppression: ≤12 hours (Simons 1990)

Half-Life Elimination

Children: 5 hours (range: 4 to 7 hours); Adults: 9 hours (range: 7 to 12 hours); Elderly: 13.5 hours (range: 9 to 18 hours) (Blyden 1986; Simons 1990)

Protein Binding

98.5% (Vozeh 1988)

5.3 Preclinical safety data

Not available

6. Pharmaceutical particulars

6.1 List of excipients

Sodium saccharin

Sodium benzoate

Potassium sorbate

Citric acid

CMC

Raspberry flavour

Apple green

Purified water

6.2 Incompatibilities

Not applicable

6.3 Shelf life

36 months - amber glass bottle and PET bottle

6.4 Special precautions for storage

Do not store above 25°C. Store in the original container.

6.5 Nature and contents of container

60/100ml syrup packed in PET amber bottle affixed with coded label which has batch number, manufacturing date and expiry dates packed in unit box with an insert and 10ml measuring cap.

100 ml and 150 ml HDPE bottle with screw cap, tamper evident cap or child resistant closure.

6.6 Special precautions for disposal and other handling

No special instructions.

7. Marketing authorisation holder

Manufacturer:

Zain Pharma limited

Plot No: 209/13741, Colchester Park,

Go-Down No.1, 2, 3, Off Mombasa Road,

Behind Nice And Lovely House,

P.O. Box: 100167-00101, Nairobi, Kenya

8. Marketing authorisation number(s)

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9. Date of first authorisation/renewal of the authorisation

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10. Date of revision of the text
