1.0 Name of the Medicinal Product:

Kofmed Expectorant

2.0 Qualitative and quantitative composition:

Each 5ml contains

Diphenhydramine Hydrochloride BP	14.2mg
Ammonium Chloride BP	130mg
Sodium Citrate BP	62.0mg
Menthol Crystal BP	1.1mg

3.0 Pharmaceutical form:

Syrup

4.0 Clinical particulars:

4.1 Therapeutic indication:

Kofmed expectorant is used for symptomatic treatment of irritating cough and cough associated with bronchitis, pulmonary congestion where retention of tenacious and viscid mucous secretions is a problem.

Ammonium chloride produces a mild irritation of the mucus lining of the stomach and this reflex increases the respiratory tract fluid relieving dryness and success of the respiratory passage.

Menthol acts as a demulcent and a soothing agent.

4.2 Posology and method of administration:

Adult: 5 - 10ml, 3 times a day after meal or when cough is severe.

Children: 6– 12 years: 5ml, 3 times a day after meal or when cough is severe.

2 – 6 years: 2.5ml, 3 times a day after meal or when cough is severe.

Or as directed by the physician.

4.3 Contraindications:

Hypersensitivity to the active substance or to any of the excipient listed in section 6.1.

4.4 Special warnings and precautions for use

Diphenhydramine should be used with caution in patients with myasthenia gravis, prostatic hypertrophy, urinary retention and narrow-angle glaucoma.

Tolerance may develop with continuous use. Seek medical advice if sleeplessness persists, as insomnia may be a symptom of a serious underlying medical illness.

It may increase the effect of alcohol, therefore alcohol should be avoided. Avoid antihistamine-containing preparations, including topical antihistamines.

May cause drowsiness

4.5 Fertility, pregnancy and lactation:

Pregnancy

Diphenhydramine crosses the placenta. Because animal reproduction studies are not always predictive of human response and since there is inadequate experience with use of diphenhydramine in pregnant women, the potential risk for humans is unknown. Use of sedating antihistamines during the third trimester may result in reactions in the new-born or premature neonates. This drug is not recommended during pregnancy. Consult a doctor before use.

Lactation

Diphenhydramine has been detected in breast milk, but the effect of this on breastfed infants is unknown. Diphenhydramine is not recommended for use during lactation. Consult a doctor before use.

4.6 Effects on ability to drive and use machines:

Do not drive or operate machinery

4.7 Undesirable effects:

Diphenhydramine occasionally causes slight drowsiness and dizziness. The drug is relatively well tolerated with minor and infrequent side effects. Rarely it causes nausea and epigastria discomfort.

4.8 Overdose and Treatment:

Overdose is likely to result in effects similar to those listed under adverse reactions

5.0 Pharmacological properties:

5.1 Pharmacodynamic properties:

Pharmacotherapeutic group: Antihistamines for systemic use – diphenhydramine, ATC Code: R06AA02.

Diphenhydramine is an ethanolamine-derivative anti-histamine with anti-cholinergic (anti-spasmodic), anti-tussive and sedative activity. It acts by inhibiting the effects on H1-receptors.

Diphenhydramine is effective in reducing sleep onset (ie, time to fall asleep) and increasing the depth and quality of sleep.

Ammonium chloride produces mild irritation of the mucus lining of the stomach and this vagovagal reflex increases the respiratory tract fluid relieving dryness and success of the respiratory passage.

Menthol acts as a demulcent and a soothing agent.

5.2 Pharmacokinetic properties:

Diphenhydramine is a histamine H1 receptor antagonist.

The main site of metabolism is the liver.

Absorption

Diphenhydramine hydrochloride is rapidly absorbed following oral administration. Apparently it undergoes first-pass metabolism in the liver and only about 40-60% of an oral dose reaches systematic circulation as unchanged diphenhydramine.

Distribution

Diphenhydramine is rapidly distributed throughout the whole body. Peak plasma concentrations are attained within 1-4 hours. The sedative effect also appears to be maximal within 1-3 hours after administration of a single dose. It is positively correlated with the plasma drug concentration.

Biotransformation

Diphenhydramine is approx 80-85% bound to plasma proteins. Diphenhydramine is rapidly and almost completely metabolised. It is metabolised principally to diphenylmetoxyacetic acid and is also dealkylated. The metabolites are conjugated with glycine and glutamine and excreted in urine. Only about 1% of a single dose is excreted unchanged in urine.

Elimination

The elimination half-life ranges from 2.4-9.3 hours in healthy adults. The terminal elimination half-life is prolonged in liver cirrhosis.

Ammonium Chloride is completely absorbed within 3-6 hours. In healthy persons, absorption of ammonium chloride given by mouth was practically completed. Only 1 to 3% of the dose was recovered in the faeces.

5.3 Preclinical safety data

Not applicable

6.0 Pharmaceutical particulars:

6.1 List of excipients

Propylene Glycol
Methyl Paraben
Propyl Paraben
Granulated Sugar
Sorbitol solution
Avicel RC 581
Sodium CMC
Caramel Colour
Vanilla Essence
Citric Acid
Demineralized Water

6.2 Incompatibilities

Not applicable

6.3 Shelf life

2 years

6.4 Special precautions for storage

Store below 30°C. Protect from light.

6.5 Nature and contents of container

100ml per bottle.
The oral cough syrup are filled capped and packed in 100ml amber pet bottles/ pack
Each pack contains a dosage cup.

6.6 Special precautions for disposal and other handling

No special requirements.

7.0 Manufacturer:

BENTOS PHARMACEUTICAL PRODUCTS LTD.
Km 8, Old Lagos Road, Ibadan, Oyo State.

Applicant:

STERLING BIOPHARMA LTD.
6, Femi Asiwaju Close, Ojodu Estate, Ojodu, Lagos.