

## **KOFAREST Syrup**

### **Composition:**

Each 10 ml of **KOFAREST Syrup** contains:

Terbutaline sulphate 2.5mg

Ambroxol hydrochloride 30 mg

Guaiphenesin 100 mg

Menthol 5 mg

### **Pharmacology**

Terbutaline is active  $\beta$ 2-adrenoceptor agonist. At therapeutic doses it acts on the  $\beta$ 2-adrenoreceptors of bronchial muscle with little or no action on the  $\beta$ 1-adrenoreceptors of cardiac muscle. Terbutaline stimulates the production of intracellular cyclic-AMP, enhancing the binding of intracellular calcium to the cell membrane and endoplasmic reticulum, resulting in bronchodilation. It also enhances mucociliary clearance.

Activation of the  $\beta$ 2-adrenoreceptors opens ATPase channels and drives potassium from the extracellular to the intracellular space. This both decreases extracellular hyperkalemia and increases intracellular potassium, so decreasing the chance of arrhythmia.

Ambroxol hydrochloride is a mucolytic agent, which liquefies thick, tenacious sputum. Ambroxol reduces the viscosity of sputum is reduced by dissolving mucopolysaccharide fibres. It also improves mucociliary clearance of secretions.

Guaiphenesin is an expectorant. It increases the output of sputum and bronchial secretions by reducing adhesiveness and surface tension. By increasing the volume of bronchial secretions, it reduces the viscosity of tenacious sputum. The increased flow of less viscid secretions also promotes ciliary action.

Menthol has a cooling effect on the throat. It has been suggested that the benefits of menthol may be due to an effect on calcium channels of sensory nerves.

**KOFAREST** is an ideal combination. The ingredients are well absorbed after oral administration and provide prompt relief.

### **Indications**

**KOFAREST Syrup** is indicated for the treatment of productive cough when associated with bronchospasm in conditions such as bronchitis, bronchial asthma, chronic obstructive pulmonary disease (COPD), bronchiectasis and emphysema.

### **Contraindications**

**KOFAREST Syrup** is contraindicated in patients with hypersensitivity to any ingredient of the formulation.

## **Precautions**

While treating cough as a symptom, it is important to make every effort to determine and treat appropriately the underlying cause, such as a specific infection.

Caution should be observed while prescribing **KOFAREST syrup** to adults and children with hypertension, cardiovascular disease, uncontrolled diabetes mellitus, hyperthyroidism, seizures or in patients who are unusually hypersensitive to sympathomimetic amines.

Since mucolytics, such as ambroxol, may disrupt the gastric mucosal barrier, **KOFAREST Syrup** should be used with care in patients with a history of peptic ulceration.

## **Pregnancy & Lactation**

Safety of **KOFAREST Syrup** has not been studied in pregnancy and lactation. Therefore, probable benefits should be weighed against possible risks, before prescribing.

## **Drug Interactions**

Hypokalemia with high doses of  $\beta_2$ -agonists may result in increased susceptibility to digitalis induced cardiac arrhythmias. Hypokalemia may be enhanced by concomitant administration of aminophylline or other xanthines, corticosteroids or by diuretic therapy.

Other sympathomimetic bronchodilators or epinephrine should not be used concomitantly with salbutamol, since their combined effect on the cardiovascular system may be deleterious to the patient.

Terbutaline should be administered with caution in patients being treated with monoamine oxidase (MAO) inhibitors or tricyclic antidepressants, since the action of Terbutaline on the vascular system may be potentiated.

## **Adverse Reactions**

The adverse reactions to Terbutaline are similar in nature to those of other sympathomimetic agents and include nervousness and tremor. The frequency of these side effects appears to diminish with continued therapy. Other commonly reported reactions include increased heart rate, palpitations, dizziness, headache, drowsiness, vomiting, nausea, sweating and muscle cramps. These reactions are generally transient and usually do not require treatment.

With ambroxol gastrointestinal side effects may occur occasionally and a transient rise in serum aminotransferase values has been reported.

Gastrointestinal discomfort has occasionally been reported with Guaiphenesin.

## **Dosage & Administration**

The usual recommended dose of **KOFAREST Syrup** in adults is 2 tablespoons bid or tid.

## **Presentation**

**KOFAREST Syrup** is available in a bottle of 100 ml.

