

## **SUMMARY OF PRODUCT CHARACTERISTICS**

### **1. NAME OF THE VETERINARY MEDICINAL PRODUCT**

TUDOMAX, 10 mg/g, powder for use in drinking water/milk

### **2. QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each g contains:

#### **Active substance:**

Bromhexine 10.00 mg  
(As bromhexine hydrochloride 10.98 mg)

#### **Excipients:**

For the full list of excipients, see section 6.1.

### **3. PHARMACEUTICAL FORM**

Powder for use in drinking water/milk  
White or cream coloured powder

### **4. CLINICAL PARTICULARS**

#### **4.1 Target species**

Cattle (calves), pigs, chickens, turkeys and ducks

#### **4.2 Indications for use, specifying the target species**

Mucolytic treatment of congested respiratory tract.

#### **4.3 Contraindications**

Do not use in cases of pulmonary oedema.  
Do not use in cases of hypersensitivity to the active substance or to any of the excipients.

#### **4.4 Special warnings for each target species**

None.

#### **4.5 Special precautions for use**

##### Special precautions for use in animals

In case of serious lungworm infection, the product should only be used 3 days after the commencement of the anthelmintic treatment.

Special precautions to be taken by the person administering the veterinary medicinal product to animals

This product may cause hypersensitivity reactions (allergy). People with known hypersensitivity to bromhexine or to any of the excipients should avoid contact with the product.

This product may cause irritation of the respiratory and gastrointestinal tracts if accidentally ingested or inhaled.

During preparation and administration inhalation of dust particles should be avoided. Wear an appropriate dust mask (either a disposable half-mask respirator conforming to European Standard EN149) or a non-disposable respirator to European Standard EN 140 with a filter to EN 143), when handling the product.

This product may cause irritation to the skin, eyes and mucous membranes. Avoid direct contact with the product. Wear gloves and protective glasses during the use of the product.

If accidental contact occurs, rinse the affected area with large amounts of clean water. If symptoms develop following cutaneous, oral or inhalation exposure, seek medical advice and show this warning to the physician. Do not eat, drink or smoke while handling this product.

Wash hands and any exposed skin after use.

**4.6 Adverse reactions (frequency and seriousness)**

None known.

**4.7 Use during pregnancy, lactation or lay**

Studies in laboratory animals have not produced evidence of foetotoxic effects or effects on fertility at the recommended dose. However this has not been specifically studied in the target species. Use only according to the benefit-risk assessment of the responsible veterinarian.

**4.8 Interaction with other medicinal products and other forms of interaction**

The product may be used in conjunction with antibiotics and/or sulphonamides and bronchodilators.

Bromhexine modifies the distribution of antibiotics in the animal and increases their concentration in the serum and in the nasal secretions (e.g. spiramycin, tylosin and oxytetracycline). When administered concomitantly with the product, antimicrobial agents should, nevertheless, not be underdosed.

**4.9 Amounts to be administered and administration route**

Oral use. For use in in drinking water, milk or liquid feed.

0.45 mg of bromhexine per kg bodyweight, equivalent to 0.45 g of powder per 10 kg bodyweight, administered daily for 3 to 10 days, in drinking water, milk or liquid feed.

The following formula may be used to calculate the required concentration of product (in milligrams of product per litre drinking water):

$$\frac{45 \text{ mg veterinary medicinal product per kg bodyweight per day} \times \text{Average bodyweight (kg) of animals to be treated}}{\text{Average daily water intake (l/animal)}} = \text{..... mg of veterinary medicinal product per litre of drinking water}$$

In order to obtain the correct dosage the concentration of bromhexine has to be adjusted accordingly. The required amount of product should be weighed as accurately as possible using suitably calibrated weighing equipment. The intake of medicated water, milk and liquid feed depends on the clinical condition of the animals.

When administering in liquid feed, first dissolve the product in water and then add feed. The preparation should be used immediately. Care should be taken that the intended dose will be completely ingested.

Any unused medicated water should be discarded after 24 hours.

The solubility of the product has been tested at the maximum concentration of 45 g/L at 20°C and at 5°C, a fine suspension may be observed.

Milk should be heated to feeding temperature prior to addition of the powder. The medicated milk should be freshly prepared prior to use and used within 3 hours.

#### **FOR PROPORTIONER:**

When using a water proportioner, adjust the pump between 1% to 5% and adapt the volume of preparation accordingly.

#### **4.10 Overdose (symptoms, emergency procedures, antidotes), if necessary**

None known.

#### **4.11 Withdrawal period(s)**

##### Cattle (calves)

Meat and offal: 2 days

Not authorised for use in animals producing milk for human consumption.

##### Pigs

Meat and offal: Zero days.

##### Chickens, turkeys and ducks

Meat and offal: Zero days

Not for use in birds producing eggs for consumption, during and 4 weeks before the laying phase.

## 5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Expectorants except combinations with cough suppressants, mucolytics.

ATCvet code: QR05CB02.

### 5.1 Pharmacodynamic properties

Bromhexine is a mucoregulator. By activating the secretion of the seromucous glands, bromhexine helps to re-establish the viscosity and elasticity of bronchial secretions in the tracheobronchial tree. In addition, its expectorant action encourages mobilisation of mucus and enables effective bronchial drainage, thereby improving the functioning and defence capability of the lung.

These two simultaneous actions lead to an abundant discharge and facilitate a productive cough.

It breaks down the network of acid glycoprotein fibres found in mucoïd sputum, which are mainly responsible for the characteristic viscosity.

### 5.2 Pharmacokinetic particulars

#### Absorption

In pigs, bromhexine is rapidly absorbed after oral administration; peak plasma concentration occurs within one to three hours.

The concentration plateau is reached 12 hours after the second or third administration.

In calves, the plasma concentrations gradually increase over several hours after administration.

In turkeys or broilers, the peak plasma concentrations are achieved within 2-4 hours after oral administration of bromhexine.

#### Distribution

Due to the lipophilic character of bromhexine, the parent compound has a strong affinity for lipid tissues and a slow depletion profile from these tissues.

#### Metabolism

Bromhexine is extensively metabolised to more polar compounds.

#### Elimination

The apparent half-life of elimination of total plasma radioactivity after the last dose is 20 to 30 hours in pigs, 40 to 50 hours in calves and 40 to 50 hours in chickens and turkeys.

## 6. PHARMACEUTICAL PARTICULARS

### 6.1 List of excipients

Citric acid  
Silica, colloïdal anhydrous  
Lactose monohydrate

## **6.2 Major incompatibilities**

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

## **6.3 Shelf life**

Shelf life of the veterinary medicinal product as packaged for sale: 3 years.

Shelf life after first opening the immediate packaging: 3 months

Shelf life after dilution in water according to directions: 24 hours.

Shelf life after dilution in milk according to directions: 3 hours.

## **6.4 Special precautions for storage**

This veterinary medicinal product does not require any special temperature storage conditions.

Keep the bags tightly closed.

## **6.5 Nature and composition of immediate packaging**

Polyethylene/aluminium/polypropylene thermosealed bags of 1 kg and 500 g

Not all pack sizes may be marketed.

## **6.6 Special precautions for the disposal of unused veterinary medicinal product or waste materials derived from the use of such products**

Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal product should be disposed of in accordance with local requirements.

## **7. MARKETING AUTHORISATION HOLDER**

SP Veterinaria, S.A.  
Ctra. Reus  
Vinyols Km 4, 1 Apto. 60  
43330 Riudoms  
Espana (Spain)

## **8. MARKETING AUTHORISATION NUMBER**

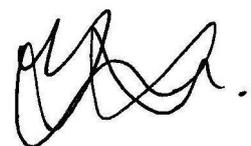
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## **9. DATE OF FIRST AUTHORISATION**

01 February 2017

## **10. DATE OF REVISION OF THE TEXT**

February 2022



Approved: 10 February 2022