# UBRE GAN

**ANTI-FLAMMATORY, HEALING**

TOPICAL OINTMENT

Health Registration No.: 2C3-8429-AGROCALIDAD

## Formula:

Each 100 g contains:

| | |
|---|---|
| Eucalyptus oil | 1.10 g |
| Phenol | 1.10 g |
| Methyl salicylate | 1.10 g |
| Camphor | 1.10 g |
| Excipients q.s. | 100.0 g |

## SPECIES AND DOSAGE:



**ADMINISTRATION**

In cattle, apply **UBRE GAN** to the affected area after washing with warm water and soap. Apply a sufficient amount and massage to promote greater absorption. Repeat the treatment daily until improvement is observed. **UBRE GAN** should be used in conjunction with the specific treatment indicated for each case.

**ROUTE OF ADMINISTRATION:** Topical.

## INIDCATIONS:

UBRE GAN is indicated for udder inflammation caused by mastitis, skin abrasions, wounds, trauma, and cracked teats. It is also indicated for inflammatory conditions of muscles and joints.

**ROUTE OF ADMINISTRATION:** Topical.

## PHARMACOKINETICS:

**METHYL SALICYLATE**

Methyl salicylate is extensively metabolized to salicylic acid in the dermal and subcutaneous tissues following topical administration. Salicylic acid is partially excreted as such and partially metabolized into salicyluric acid conjugated with glycine, as well as into the glucuronic acid conjugates salicyl-phenolic-glucuronide and salicylaryl glucuronide, and the oxidation product gentisic acid.

**PHENOL**

Phenol is a normal component of animal and human tissues and is produced in urine, feces, saliva, and sweat. Bacterial breakdown of proteins in the digestive tract results in the production of background levels of phenol.

Phenol is metabolized primarily by conjugation with glucuronic acid and sulfate and is excreted in the urine. Approximately 77% of the sublethal dose administered was excreted in the urine of rabbits within 24 hours after administration. In rats, approximately 60% of the orally administered dose was metabolized 4 hours after administration.

**EUCALYPTUS**
After local application, eucalyptus oil is rapidly absorbed. Following topical application of an ointment containing 66.5 mg of cineol, 15% of the compound was found in rat skeletal muscle after 3 hours. When the same ointment was applied under occlusive conditions, the reabsorption rate increased to 60%.

**CAMPHOR**
Camphor, due to its lipophilic nature, is generally considered to be rapidly absorbed in significant amounts through the mucous membranes and intact skin. Metabolism occurs via hydroxylation and conjugation of the substance with glucuronic acid. Camphor and its metabolites are excreted primarily in the urine.

## MECHANISM OF ACTION

**METHYL SALICYLATE**
The mechanism of action of salicylates is based on the inhibition of the cyclooxygenase enzyme, which is involved in the synthesis of prostanoids from arachidonic acid, as is the case with all salicylic acid derivatives. They also inhibit the release of PGF2α and PGE2 from thrombin-stimulated platelets, as well as the synthesis of thromboxanes, and promote the production of prostacyclin (PGI2). There is a reasonably good correlation between the potency of cyclooxygenase inhibition and its anti-inflammatory activity. This effect depends solely on the drug that reaches the enzyme.

**PHENOL**
Phenolic compounds cause structural disruption of the cytoplasmic membrane of bacteria, which interferes with its normal functioning. This causes the loss of small metabolites from the intracellular environment and impairs both active transport and energy metabolism. Additionally, it irreversibly activates the oxidases and dehydrogenases bound to the membrane.

**EUCALYPTUS**
Many of the observed pharmacological effects are caused by the essential oil and its main component, 1,8-cineole. Several in vitro and ex vivo studies have shown that 1,8 cineole inhibits the production of pro-inflammatory arachidonic acid derivatives and cytokines. Eucalyptus essential oil inhibited the release of ethene from α-keto-γ methyolbutyric acid by the Fenton oxidant in a concentration-dependent manner, with significant inhibition beginning at 0.1% oil concentration.

**CAMPHOR**
Camphor is used topically in veterinary medicine as a mild analgesic (antipruritic), antiseptic, and rubefacient (EMEA, p. 1). Similar to menthol, it stimulates sensory nerve endings, inducing a cooling sensation, mild analgesia, and mild antipruritic effects. Camphor acts on the skin to induce hyperemia. Rubefacients may work by increasing blood flow to the area.

## PRECAUTIONS, WARNINGS, AND CONTRAINDICATIONS

Wash the udder before milking.

## DRUG INTERACTIONS

None reported.

## ADVERSE REACTIONS

None reported.

## WITHDRAWAL

Not required.

## COMMERCIAL PRESENTATIONS

Jar, 100 g.
Jar, 200 g.
Jar, 800 g
Jar, 3,000 g.