

HIFORM



THE SCIENCE OF NATURAL HEALTH

BREATHE

Product Information Guide

BREATHE

RESPIRATORY HEALTH

**Breathe is designed to aid horses
breathe easy.**

- To Assist with respiratory function
- It is ideal for horses stabled for long periods
- Well Suited to horses in dusty environments

The Chemistry of Breathe

Althaea officinalis (Marshmallow) Leaf and Root

Hi Form's formulation of 'Breathe' boasts the inclusion of both the root and leaf of *Althaea officinalis* as both parts of the plant have high concentrations of active constituents. It is mainly used in the treatment of respiratory conditions such as coughs and sore throats, due to its antitussive, anti-inflammatory, mucilaginous and antibacterial properties.

The main constituent in *Althaea officinalis*, which gives the herb its beneficial effects is a substance found mostly in the leaves called mucilage. Mucilage binds with water and forms a gel which has a healing and soothing effect on the respiratory system. It has been found to assist in soothing irritated mucous membranes and preventing further irritation (1). Therefore, assists in the treatment of sore throats and dry coughs.

Althaea officinalis is also highly regarded for its antimicrobial properties. Thus, having a dual effect on the respiratory system, it is not only soothing irritated membranes but also significantly reducing gram-negative and gram-positive bacteria associated with common respiratory infections (1).

In addition, various studies have shown *Althaea officinalis* to have an anti-inflammatory effect on the body by stimulating phagocytosis and macrophage activity (1,2). Both processes engulf foreign bacteria and dead cells to speed up the healing process. This is thought to be due to its high concentration of the polysaccharide; rhamnogalacturonan which has also been found to inhibit cough reflexes (1,2,3).

Hence, its well renowned benefits in treating respiratory conditions.



HI FORM EQUINE

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Feed rates:

300kg Pony	11g (1 Large Level Scoop)
500kg Horse	22g (2 large Level Scoops)
600+kg Horse	33g (3 Large Level Scoops)

Feeding Instructions:

Mix well into slightly damp feed. Feed rate may be doubled if required.

Thymus vulgaris (Thyme)

Thymus vulgaris has strong antimicrobial, antitussive, antiseptic, spasmolytic and expectorant activities, which makes it another important part of the treatment of respiratory conditions. Its main constituent; thymol, as well as being antitussive, has been demonstrated to be highly efficaciousness in the eradication of bacteria in many studies (1,3,4).

The expectorant activity of Thymus vulgaris in respiratory infections aids in the reduction and liquidation of thick mucus production, this enables easier clearance of excess mucus and allows for a faster recovery and eliminates the risk of further infection (1,2). Liquid extracted Thymus vulgaris has also shown to have spasmolytic effects on the tracheal smooth muscle, which adds to its therapeutic action in healing an irritated and sore throat (3,5).

Trigonella foenum - graecum (Fenugreek) Seeds

As well as the anti-inflammatory, antiseptic, mucilaginous, expectorant and soothing actions, which are also contained in Althaea officinalis and Thymus vulgaris, Trigonella foenum – graecum also shares these attributes as well as adding tonic and antioxidative qualities both of which act together to improve the wellbeing and immune resistance of the individual (1,2,3).

The active constituents of Trigonella foenum – graecum have been affective in nitric oxide–producing enzymes, alterations of proinflammatory mediator production, and the gene expression of these mediators. The modulatory role in which these constituents play on the inflammatory pathways, aids in the improvement and support of a proper of immune function (1,3).

In addition, the high levels of flavonoids which Trigonella foenum – graecum contains, such as uercetin and apigenin, add to the anti-inflammatory effect. Significant evidence has shown these flavonoids to inhibit specific proinflammatory cytokines; TNF- α and IL-6; both of which play a pivotal role in immune system regulation (3,4).



Mentha piperita (Peppermint) extract 10:1

Mentha piperita, particularly the leaves, are well known for their medicinal use and worldwide for due to its popularity in tea preparations. The main volatile components of the essential oil are menthol and menthone. In vitro, Mentha piperita has significant antimicrobial and antiviral activities, strong antioxidant and antitumor actions, and some antiallergenic potential as well as cooling qualities which have aided in its success with soothing sore and irritated mucus membranes

(1). The spasmolytic effects have also been found to benefit in the treatment of the harsh respiratory contractions which leads to coughing (1,2,3).

Glycyrrhiza glabra (Licorice) Powder

The main bioactive component of Glycyrrhiza glabra is Glycyrrhiza acid, which studies have found great therapeutic actions in the treatment of asthmatic and respiratory tract conditions. The way Glycyrrhiza acid acts is through its effect on reducing the individuals' inflammatory cytokines and modulate the immune system pathways. This action prevents overactivity and oversensitivity of the immune cells, which commonly lead to allergic respiratory symptoms (1). In addition, studies in asthmatics have found the anti-inflammatory effects of Glycyrrhiza glabra to have an inhibitory effect on airway constriction, therefore assisting in the treatment of respiratory irritations and infections (1,2). These antitussive properties are due to the high concentration of liquiritin and liquiritigenin in Glycyrrhiza glabra (3).

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