BreathEazy

Contents

Supporting equine respiratory health and performance

Balsamic Air

Composition	mg/per 25ml
Eucalyptus *(Eucalyptus globulus)*	136 mg
Niaouli *(Melaleuca viridiflora)*	136 mg
Scots pine *(Pinus sylvestris)*	129 mg
Rosemary *(Rosmarinus officinalis)*	136 mg
Terpineol	128 mg
Grindelia *(Grindelia robusta)*	34 mg

KEY FEATURES

- Blend of essential oils
- Can be administered orally or by nebulisation
- Supports airway health all year round
- Can be used at periods of higher risk, including transportation

Use guidelines

- Routine use: Supports long-term respiratory health and airway maintenance
- During risk periods: Begin three days prior to transportation and continue for several days after
- Nebulisation: For best results use a high flow cup
- Nebulisation of Balsamic Air complies with FEI General Regulations

Balsamic Air ~ Routine airway maintenance for respiratory health

Horses are exceptional athletes with a maximal oxygen uptake far exceeding that of humans, yet their performance is limited by their unique respiratory anatomy. As obligate nasal breathers, they cannot mouth-breathe to reduce airflow resistance, making even minor airway compromise significant. During intense exercise, virtually all horses experience some degree of hypoxaemia, so maintaining clear, healthy airways is vital for performance and recovery.[1,2]

Respiratory disorders such as equine asthma and exercise-induced pulmonary haemorrhage (EIPH) are common causes of poor performance.[3,4] Even mild airway inflammation can affect gas exchange and alongside environmental management, nebulisation of prescribed medication is the cornerstone of management. Nebulisation, using the Flexineb® E3 nebuliser enables targeted delivery of medications to the lungs and lower airways, enhancing local availability while minimising systemic side effects.

Balsamic Air offers a non-drug option that can complement prescribed treatments or be used between flare-ups. Its blend of essential oils - including eucalyptus, niaouli, pine and rosemary - has recognised airway-clearing and soothing properties, supporting mucus clearance and respiratory comfort. When used routinely, Balsamic Air helps maintain airway hygiene and resilience, especially in horses exposed to dust, pollen or other irritants.

Nebulisation of non-drug formulations is increasingly used for proactive respiratory maintenance - helping horses cope better during travel, training or seasonal challenges. While further studies are needed, this approach aligns with modern preventive strategies aimed at optimising equine welfare and performance.

References 1. Mazan, M. (2022) 2. Franklin, S.H. (2012) 3. Lo Feudo, C. M. *et al.* (2022) 4. Scott Pirie, R. (2018)

Immuno-San

KEY FEATURES

- Blend of essential oils for nebulisation
- Study data supports immune and respiratory benefits
- Anti-inflammatory and antimicrobial activity
- Ideal for use during travel, training or competition

Composition
Eucalyptus *(E. globulus, E. radiata)*
Tea tree *(Melaleuca alternifolia)*
Lavender *(Lavendula hybrida)*
Mint *(Mentha arvenis)*
Camphor *(Cinnamomum camphora)*
Rosemary *(Rosmarinus officinalis)*

Use guidelines

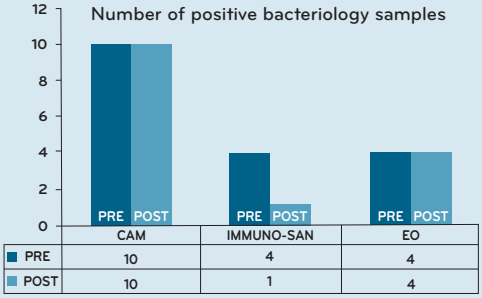
- For horses in work before a stressful situation such as travelling or stud.
- Administer 5 ml twice daily by nebulisation
- Recommended 10 day course, repeated as often as required
- Nebulisation: For best results use a high flow cup
- Nebulisation of Immuno-San complies with FEI General Regulations

Note: 48hr withdrawal period for racing due to camphor content

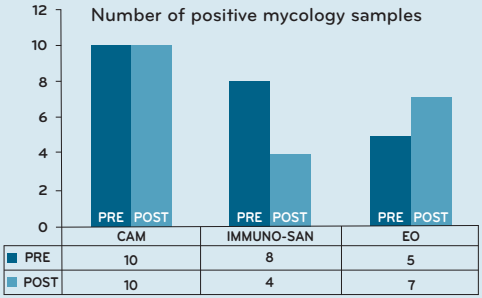
Immuno-San ~ Evidence-based support for respiratory health

A controlled clinical trial presented at the World Equine Airway Symposium evaluated Immuno-San in 39 sport horses diagnosed with inflammatory airway disease (IAD). Horses were treated with either corticosteroids and antimicrobials (CAM), CAM followed by a general essential oil blend (EO), or CAM followed by Immuno San.[5]

Those receiving Immuno-San showed a significant reduction in tracheal wash and bronchoalveolar lavage (BAL) neutrophils ($p = 0.02$) and fewer positive bacterial and fungal cultures ($p = 0.002$ and 0.007) compared with the other groups (Figure 1).



	CAM	IMMUNO-SAN	EO
PRE	10	4	4
POST	10	1	4



	CAM	IMMUNO-SAN	EO
PRE	10	8	5
POST	10	4	7

Figure 1. Comparison between pre and post treatment bacterial and fungal cultures in the treatment groups.

These findings demonstrate Immuno-San's capacity to reduce airway inflammation and microbial colonisation, supporting recovery and respiratory resilience in active horses.

Essential oil research

The ingredients in Immuno-San are among the best-characterised essential oils for respiratory health.

- Eucalyptus oils may improve mucociliary clearance and oxygen exchange while supporting bronchodilatory and antiviral activity.[6-9]
- Studies suggest tea tree oil has antimicrobial and vapour-phase antiviral effects.[10-11]
- Lavender oil may reduce airway stress.[10]

Together, these ingredients contribute to Immuno-San's dual action in promoting clearer airways and supporting natural immune defences.

References 5. Van Erck-Westergren, E. *et al.* (2017) 6. Hoch, C. *et al.* (2023) 7. Amini, N. *et al.* (2022) 8. Chen, T. *et al.* (2024) 9. Mieres-Castro, D. *et al.* (2021) 10. Ali, B. *et al.* (2015) 11. Horváth, G. & Ács, K. (2015)

Sano-Red

KEY INFORMATION

A solution for nebulisation to support horses experiencing nose bleed or exercise-induced pulmonary haemorrhage (EIPH).

Use guidelines

- Respiratory support for horses prone to EIPH
- For use post-bleeding or to support reduction of risk of recurrent bleeding
- Administer 5 ml twice daily by nebulisation
- Recommended 10 day course, repeatable as often as required
- Use undiluted
- Use at the start of work and during intense work
- Nebulisation of Sano-Red complies with FEI General Regulations

Composition
Knella *(Visnaga vera)*
Rock rose *(Cistus ladaniferus)*
Myrtle *(Myrtus)*
Thyme *(Thymus vulgaris)*
Eucalyptus globulus
Eucalyptus citriodora
Lavender *(Lavandula angus folia)*
Pelargonium graveolens
Rosemary *(Romarinus officinali)*
Siberian fir *(Abies sibirica)*

Sano-Red ~ Mechanism of action and clinical context

Exercise-induced pulmonary haemorrhage (EIPH) is a common cause of reduced performance in sport and racehorses. High pulmonary pressures during maximal exercise can lead to remodelling of pulmonary vein walls, increased capillary stress, and eventual vessel rupture into the alveoli. While epistaxis is visible in only a small percentage of cases, endoscopic and lavage studies indicate that bleeding occurs in up to 90 percent of racehorses. Even mild or repeated episodes can impair gas exchange and drive chronic airway inflammation and fibrosis, highlighting the need for proactive respiratory support.[12]

Khella *(Ammi visnaga, syn. Visnaga vera)* contains γ-pyrones such as khellin and visnagin, known to relax bronchial and vascular smooth muscle via calcium-channel modulation.[13] This may help reduce vascular resistance and support pulmonary circulation during exertion - a potential benefit for horses prone to EIPH, though more clinical studies are needed.

Complementary botanicals in Sano-Red, including eucalyptus, thyme, cistus, and myrtle, support airway integrity and recovery following episodes of respiratory stress or bleeding.

12. Lascola, K.M. (2023) 13. Khalil, N., *et al.* (2020)

Sano-Stress

KEY FEATURES

- Natural essential oil blend to support calm, focused performance
- Helps manage stress associated with training, travel or competition
- Acts through olfactory stimulation

Use guidelines

- Administer 5 ml once or twice daily by nebulisation
- Use 30–45 minutes before work or transport
- Nebulisation of Sano-Stress complies with FEI General Regulations

Note: 48hr withdrawal period for racing due to camphor content

Composition
Lavender *(Lavandula angustifolia)*
Bergamot *(Citrus bergamia)*
Geranium *(Pelargonium graveolens)*
Ylang-ylang *(Cananga odorata)*
Marjoram *(Origanum majorana)*
Litsea *(Litsea citrata)*
Rosewood *(Aniba rosaeodora)*
Juniper *(Juniperus communis)*
Laurel *(Laurus nobilis)*
Camphor *(Cinnamomum camphora)*

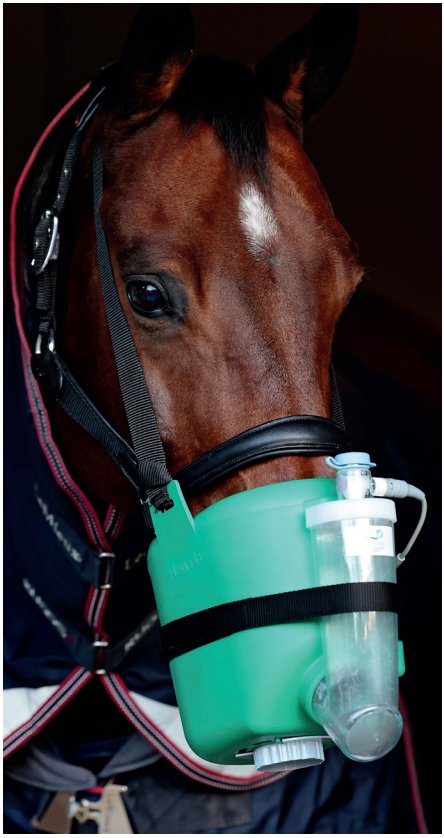
Supporting calm behaviour

Chronic or repeated stress elevates cortisol and can impair recovery, compromise immune function and have a negative impact on overall health and wellbeing. The essential oils used in Sano-Stress have been researched for their anxiolytic and relaxing effects in human and animal models.

For example, lavender *(Lavandula angustifolia)*, bergamot *(Citrus bergamia)* and geranium *(Pelargonium graveolens)* have been shown in human clinical studies to reduce physiological markers of stress, including blood pressure and salivary cortisol.[14,15]

Medical saline

In addition to essential oil formulations, nebulised saline remains a valuable non-drug therapy for maintaining airway health. When inhaled, saline acts directly on respiratory mucus, reducing its viscosity and supporting clearance from the airways. This action results from the breakdown of oligosaccharide cross-links within mucus. Excess mucus can block small airways and impair gaseous exchange in the lungs. It may also trap irritants, bacteria and inflammatory mediators.



Emerging evidence also suggests that nebulised saline may help down-regulate certain inflammatory cytokines within the lungs.[16] This dual action - supporting mucus clearance and potentially mitigating airway inflammation - makes saline a useful option for routine airway management, both in horses prone to respiratory conditions and in those where optimal respiratory health is essential.

References 14. Rashidi Fakari, F. *et al.* (2015) 15. Watanabe, E. *et al.* (2015) 16. Bond, S. & Léguillette, R. (2024)

SilvaPlex™ Immune Support

KEY FEATURES

- Chelated nanoparticle silver compound for nebulisation
- Provides broad-spectrum antimicrobial and immune support
- Laboratory and pre-clinical studies demonstrate activity against: Bacteria, Fungi, Biofilm, Enveloped viruses.

Use guidelines

- Administer neat via nebulisation – do not dilute with saline
- Follow label instructions for administration volume
- Ideal for use during periods of increased infection risk and outbreaks of respiratory disease
- Use as an adjunct to veterinary prescription medication

SilvaPlex™ Mechanism of action

SilvaPlex™ uses the well-established antimicrobial properties of nanoparticle silver through a chelated formulation that ensures stability and consistent particle size. While the exact mechanism of action is uncertain, silver nanoparticles are thought to act via multiple complementary mechanisms. These include adhesion to the surface of the bacterial cell wall and membrane, penetration into the cell and disruption of intracellular organelles and biomolecules, induction of oxidative stress, and modulation of signal transduction pathways.[17]

Activity against respiratory pathogens

In an in vitro study, nebulised silver nanoparticles (AgNP) demonstrated potent bactericidal activity against two common equine respiratory pathogens, *Streptococcus equi subsp. zooepidemicus* and *Actinobacillus equuli subsp. equuli*. Growth of *A. equuli* was completely inhibited after nebulisation of low concentrations of AgNP, while *S. zooepidemicus* required higher concentrations for similar results.[18]

Further research has shown that nebulised chelated silver nanoparticles also offer virucidal properties. In studies on equine herpesvirus-1 (EHV-1), infectivity was reduced by more than three orders of magnitude following nebulisation of chelated silver.[19] While further in vivo studies are needed, these findings suggest that silver solutions can be used to provide additional support during periods of heightened viral risk, helping to limit the spread of respiratory infections on a yard.

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