



# SUPPORTING THE EQUINE SECTOR

with



protection

**HygieniaTouch<sup>©</sup>** is a brand name of IngeniaTouch Ltd. | Reg, 36 Fitzwilliam Square | Dublin 2, D02 HX82, Ireland  
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## CHALLENGING:

The equine industry, while a source of economic activity and cultural heritage, faces several challenges that impact the welfare of horses and the sustainability of the sector. Among these challenges are land use issues, the welfare of horses in transition or at risk, and the rising costs of horse keeping. Additionally, the health of horses is paramount, with respiratory issues being a significant concern, particularly when horses are exposed to pathogens, viruses, and environmental stresses such as ammonia from urine and faeces.

Ammonia, which is a strong irritant, can cause tissue irritation in the skin, eyes, nasal passages, sinuses, respiratory tract, and lungs. The effects can range from short-lived discomfort to chronic, irreversible, and sometimes life-threatening effects.

When it comes to traveling, horses are at risk of developing pleuropneumonia, commonly known as shipping fever, which is often associated with long-distance travel where the horse's head is tied high, preventing adequate clearance of particulates from the lungs. To prevent lung impairment during travel, it's important to:

- Allow the horse a free head as much as possible during the trip.
- Take regular breaks for rest.
- Feed and water the horse regularly along the way.
- Ensure excellent ventilation and air-exchange in the horse compartment.

Additionally, a dust- and ammonia-free stable environment is crucial to prevent further damage to the respiratory system. It's also essential to manage the levels of ammonia in the stable by addressing the underlying problem, which is usually the decomposition of urine and faeces producing ammonia.

## THE SOLUTION:



One innovative solution that has the potential to address multiple issues, particularly in improving the stable environment, is the use of **HygieniaTouch**<sup>®</sup>, a titanium dioxide (TiO<sub>2</sub>) in conjunction with appropriate lighting. **HygieniaTouch**<sup>®</sup> is a photocatalyst that, when activated by violet or natural light, can effectively reduce the concentration of harmful substances like ammonia and other volatile organic compounds (VOCs) in the air. This photocatalytic action can also neutralise pathogens and reduce the spread of infectious diseases, which is crucial for the health of horses, especially those that are confined indoors for extended periods.

The application of **HygieniaTouch**<sup>®</sup> in horse stables can be a game-changer. By coating surfaces with **HygieniaTouch**<sup>®</sup> and installing violet LEDs sources, stables can become self-sanitising environments. The reaction between TiO<sub>2</sub> and UV light produces reactive oxygen species that can decompose organic pollutants, thus purifying the air and surfaces. This not only improves the air quality but also minimises the risk of respiratory issues in horses, enhancing their overall well-being and performance.

Moreover, the use of **HygieniaTouch**<sup>®</sup> is environmentally friendly and sustainable. Unlike chemical disinfectants, **HygieniaTouch**<sup>®</sup> does not leave harmful residues and does not contribute to antimicrobial resistance. It is a passive system that requires minimal maintenance once installed, making it cost-effective in the long run.

In conclusion, the equine industry must continuously seek innovative solutions to ensure the welfare of horses and the viability of the sector. The implementation of **HygieniaTouch**<sup>®</sup> photocatalysis in stables represents a promising step forward, offering a healthier environment for horses while addressing broader industry challenges. As we move towards more sustainable practices, such technologies will play a pivotal role in shaping the future of equine care and management.

**HygieniaTouch**<sup>®</sup> protection, a nano-coating derived from Titanium Dioxide (TiO<sub>2</sub>), is safe for humans, animals and the environment. It is easily applied and boasts durability that extends for a year.

Turn your facility and assets into a healthy and odor-free area and enjoy the freshness.



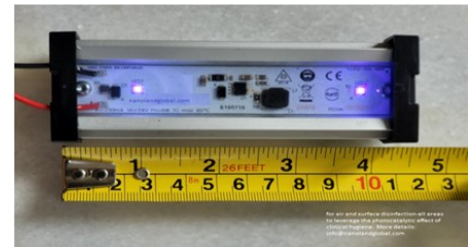
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## STEP 1: Small UV-LED lamps are installed

**HygieniaTouch**<sup>®</sup>-protection is activated by UV light, either from the sun or UV lamps.

The HT-light-lamps emit the same light as a small fluorescent lamp but are based on LED technology and have a lifespan of 50,000 hours. It is safe for eyes and skin, and not the same as UV light in hospital de-contamination units.



The **HygieniaTouch**<sup>®</sup>-protection and the lighting work together to achieve the desired results. When activated by light in the presence of ambient humidity and oxygen from the air, the surfaces continuously and safely produce natural radicals that, in turn, can eliminate microorganisms and toxic gases that cause odors.

With our technology, surfaces are active 24 hours a day, preventing the development of viruses or colonies of bacteria that could cause diseases.

Micro lamps will be installed in corners and at heights to illuminate most of the surfaces. Usually, one micro lamp per room is sufficient, but in case there are too many shadowed areas, a second micro lamp is recommended.

## STEP 2: Treatment with HygieniaTouch<sup>®</sup> - protection

The invisible, water-based, and completely non-toxic **HygieniaTouch**<sup>®</sup>-protection is applied once per season and its activity is permanent if it receives daylight. 1 liter of **HygieniaTouch**<sup>®</sup>-protection will cover 8-10 sq meter.



**HygieniaTouch**<sup>®</sup>-protection is applied by spraying. A low-pressure gardening sprayer will do.

From a sustainability perspective, cleaning is also made much easier once our protective surface treatment is applied. The unique hydrophobic, hydrophilic nature of the treatment means that dirt and grime cannot bond to the substrate, thus significantly reducing cleaning times, water usage, chemicals and effort.

The facilities will also be better protected against the influence of UV and will help remove methane and negative climate pollutants from the air. The efficacy of this product is firmly based on numerous physicochemical studies.



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