

# MS TerraFeed Fe

## Microbiological quality

### Background

**MS TerraFeed Fe** contains multiple ingredients, including peat. Peat is partially decomposed plant material that accumulates in wetlands. The bacterium *Mycobacterium avium* is widely distributed in the environment, especially in soil, water, and organic matter. Peat may therefore contain *M. avium*, as the environmental conditions (moisture, acidity, and organic load) are favourable for *M. avium* survival. In addition, it may also contain other natural microbiological contaminants.

Therefore, an **irradiation procedure**, which is based on similar techniques used for sterilization of surgical tools or medical implants, is routinely applied for the MS TerraFeed. This procedure has been evaluated by Wageningen Bioveterinary Research (WBVR), part of Wageningen University and Research (WUR), and results confirm that the irradiation protocol achieves 100% inactivation, even in samples with extremely high concentrations of *M. avium*. Also, other microbiological agents are effectively decontaminated.



### Microbiological decontamination by irradiation

The irradiation procedure has been certified to kill a wide range of potential microbial pathogens (if present), including but not limited to *Escherichia coli*, *Proteus vulgaris*, *Salmonella enteritidis*, *Salmonella typhimurium*, *Salmonella enteritidis*, *Salmonella meleagridis*, *Salmonella derby*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Mycobacterium tuberculosis*, *Aspergillus fumigatus*.

### Additional laboratory test

	Results (CFU/g) non-irradiated	Results (CFU/g) irradiated
<i>Salmonella typhimurium</i>	<100	<100
<i>Salmonella enteritidis</i>	<100	<100
Total aerobic plate count	290,000	<100
Enterobacteriaceae	<100	<100
<i>Escherichia coli</i>	<100	<100

In addition, prior to the peat packaging process, sampling is carried out in accordance with GMP+ and N.V.W.A. guidelines (\*), where the material is analyzed by RT-PCR and confirmed to be free of African swine fever.

(\*) Good Manufacturing Practice Plus

(\*) Netherlands Food and Consumer Product Safety Authority

*To obtain the corresponding analyses and certifications, please contact your official distributor.*