Final Test Horse | Equine | **Sample #FINAL-001**

Analyzed: 2025-10-28
Report: 2025-10-28

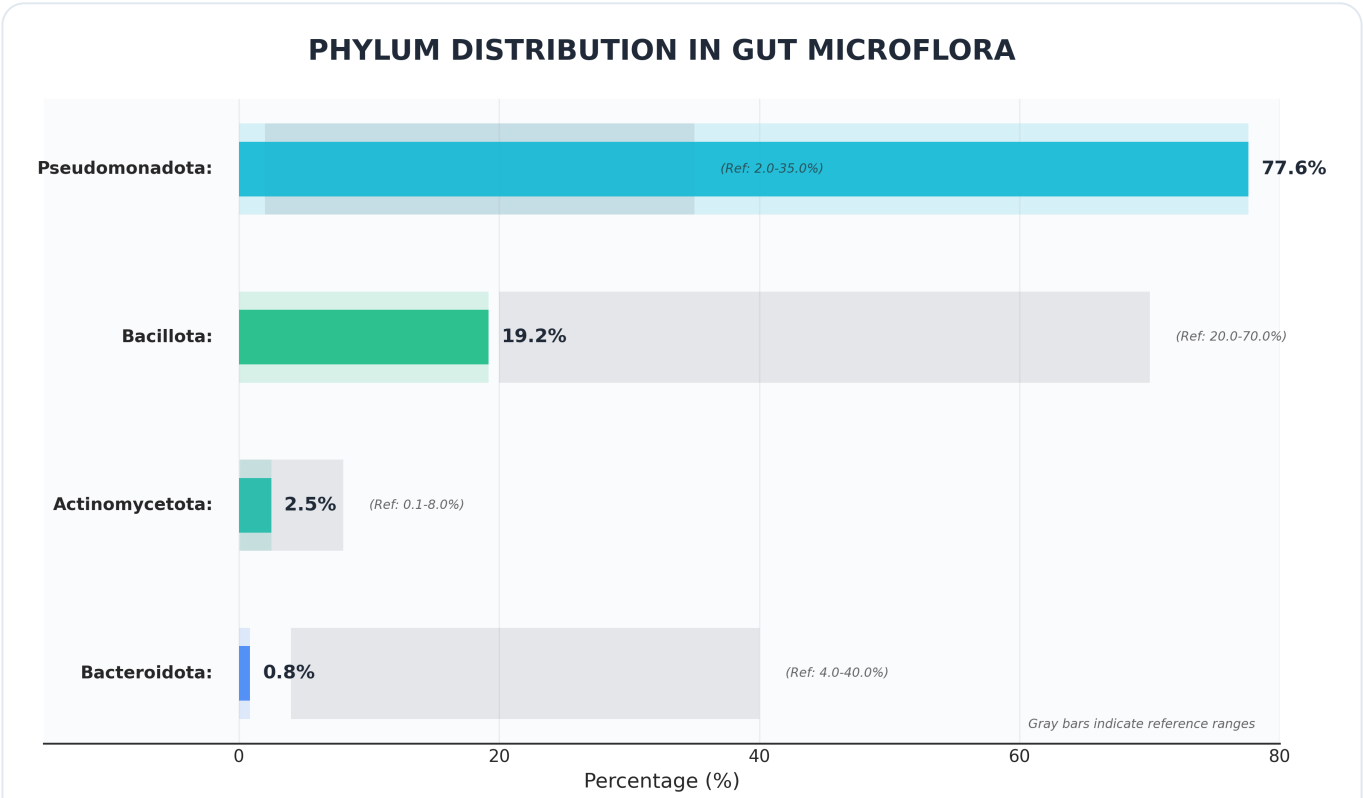
Microbiome Sequencing Results

54.9

Dysbiosis Index

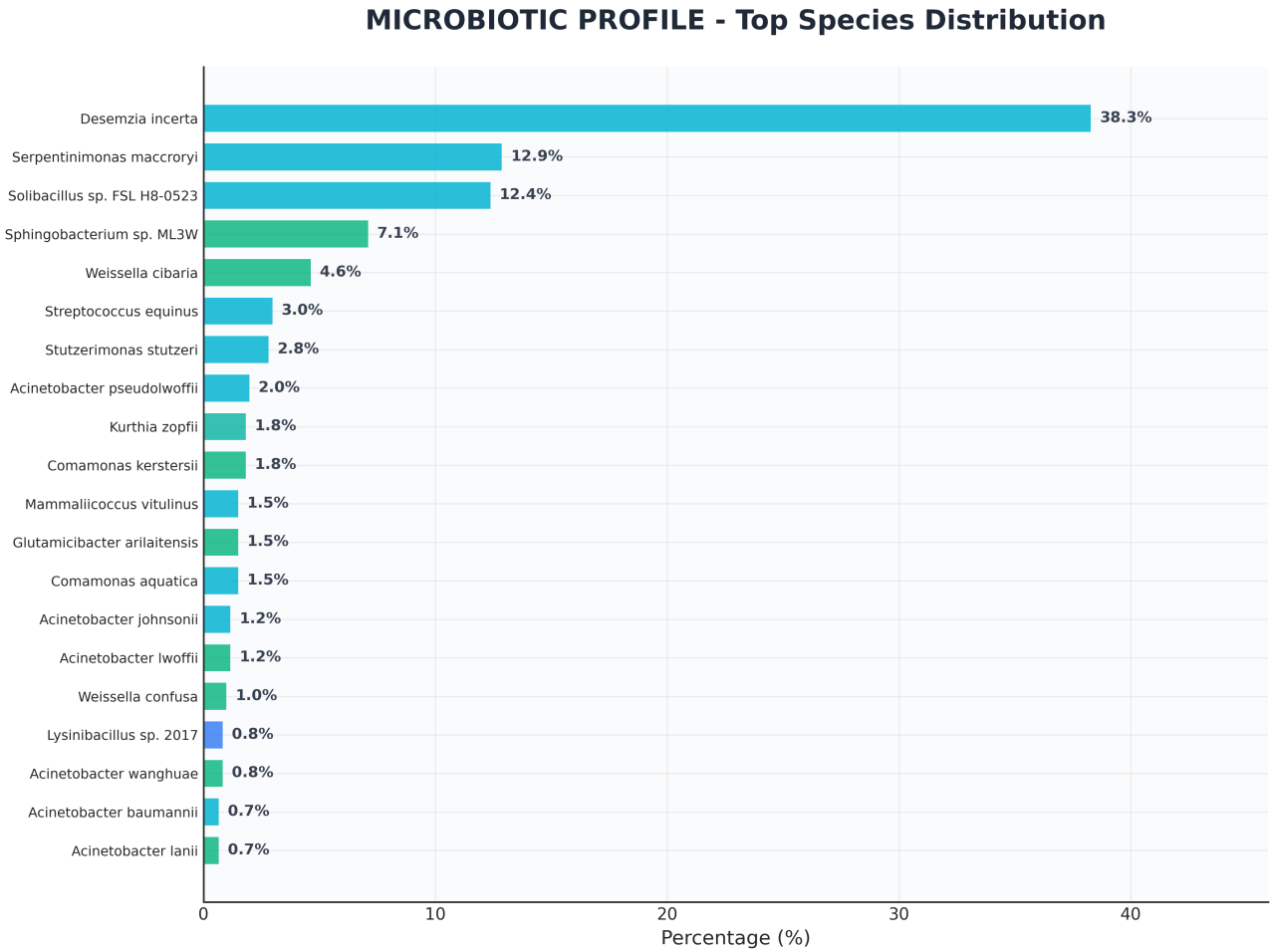
Severe Dysbiosis

Phylum Distribution in Gut Microflora



Bacterial Species Distribution

Top 20 Bacterial Species by Abundance



Clinical Interpretation

Clinical Assessment

The microbiome analysis reveals **severe dysbiosis** with an index of 54.9. This indicates a significant imbalance in the gut microbial community requiring immediate attention. The disrupted microbial ecology may compromise digestive function, nutrient absorption, and immune responses.

Key Findings

Low Bacillota: 19.2% (Normal: 20-70%). Associated with reduced fiber fermentation and butyrate production.

Low Bacteroidota: 0.8% (Normal: 4-40%). May indicate compromised carbohydrate metabolism.

Elevated Pseudomonadota: 77.6% (Normal: 2-35%). May indicate inflammation or pathogenic overgrowth.

Clinical Recommendations

- Immediate dietary modification: Increase forage to 2% body weight daily minimum
- Implement therapeutic probiotic protocol with veterinary guidance
- Eliminate or significantly reduce concentrate feeds temporarily
- Consider prebiotic supplementation (FOS, MOS, or psyllium)
- Re-evaluate microbiome in 4-6 weeks to assess response
- Screen for underlying gastrointestinal pathology if dysbiosis persists

Summary & Management Guidelines

Report Summary

Dysbiosis Index: 54.9
Category: Severe
Dominant Phylum: Pseudomonadota

Total Species Identified: 26
Sample Quality: Adequate
Analysis Method: Shotgun metagenomic NGS

Understanding the Dysbiosis Index

The Dysbiosis Index (DI) quantifies the degree of microbial imbalance in the gut:

- **0-20:** Normal, healthy microbiome
- **21-50:** Mild dysbiosis requiring dietary adjustment
- **>50:** Severe dysbiosis requiring intervention

Management Guidelines

Managing Severe Dysbiosis

- Immediate dietary restructuring under veterinary guidance
- Maximize forage, minimize concentrates
- Therapeutic probiotic protocol (10^10 CFU daily)
- Consider fecal microbiota transplantation if available
- Monitor for signs of colic or laminitis
- Re-test in 4-6 weeks to assess improvement

Follow-up Testing

Dysbiosis Category	Re-test Timeline	Monitoring Focus
Normal	12 months	Annual health screening
Mild	2-3 months	Response to dietary changes
Severe	4-6 weeks	Treatment efficacy

Complete Bacterial Species List

Species	Abundance (%)	Phylum
Acinetobacter lanii	38.28%	Pseudomonadota
Acinetobacter baumannii	12.87%	Pseudomonadota
Acinetobacter wanghuae	12.38%	Pseudomonadota
Lysinibacillus sp. 2017	7.10%	Bacillota
Weissella confusa	4.62%	Bacillota
Acinetobacter lwoffii	2.97%	Pseudomonadota
Acinetobacter johnsonii	2.81%	Pseudomonadota
Comamonas aquatica	1.98%	Pseudomonadota
Glutamicibacter arilaitensis	1.82%	Actinomycetota
Mammaliicoccus vitulinus	1.82%	Bacillota
Comamonas kerstersii	1.49%	Pseudomonadota
Kurthia zopfii	1.49%	Bacillota
Acinetobacter pseudolwoffii	1.49%	Pseudomonadota
Stutzerimonas stutzeri	1.16%	Pseudomonadota
Streptococcus equinus	1.16%	Bacillota
Weissella cibaria	0.99%	Bacillota
Sphingobacterium sp. ML3W	0.83%	Bacteroidota
Solibacillus sp. FSL H8-0523	0.83%	Bacillota
Serpentinimonas maccroryi	0.66%	Pseudomonadota
Desemzia incerta	0.66%	Bacillota
Acinetobacter indicus	0.50%	Pseudomonadota
Ligilactobacillus salivarius	0.50%	Bacillota
Acinetobacter sp. ANC 7201	0.50%	Pseudomonadota
Acinetobacter sp. NCu2D-2	0.50%	Pseudomonadota
Brachybacterium vulturis	0.33%	Actinomycetota
Brachybacterium sp. Z12	0.33%	Actinomycetota

For questions regarding this report, please contact:
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