# MICROBIOLOGICAL QUALITY OF BOAR SEMEN DURING HYPOTHERMIC STORAGE

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***Abstract***

*The study aimed to evaluate the effects of biologically active compounds on the microbiological stability of boar semen during hypothermic storage. Semen samples were diluted with the basal GHȚS extender (control) and four experimental formulations supplemented at different concentrations. Storage periods were five days for Extenders 1, 3, and 4, and 96 hours for Extender 2. Microbiological analyses included total viable count (TVC), Escherichia coli, Staphylococcus spp., selected bacterial groups, and fungi.Microbial counts varied with extender composition and supplement concentration. In Extender 1, supplementation at 0.6–0.8% resulted in lower TVC and fungal counts than the control. After five days, Extenders 3 and 4 supplemented at 0.9% showed TVC values of 1.0 × $10^2$ and 1.5 × $10^2$ CFU/mL, respectively, compared with 3.3 × $10^2$ and 3.6 × $10^2$ CFU/mL in the corresponding controls. At 0.9%, E. coli was undetectable, while fungal counts reached 1.0 × $10^2$ and 1.1 × $10^2$ CFU/mL, respectively. However, not all supplemented treatments showed lower microbial counts than the controls.These findings suggest that selected biologically active supplements may improve the microbiological stability of boar semen during hypothermic storage, depending on extender formulation and concentration.*

***Key words:*** *boar semen, preservation, semen extenders, fungi*