

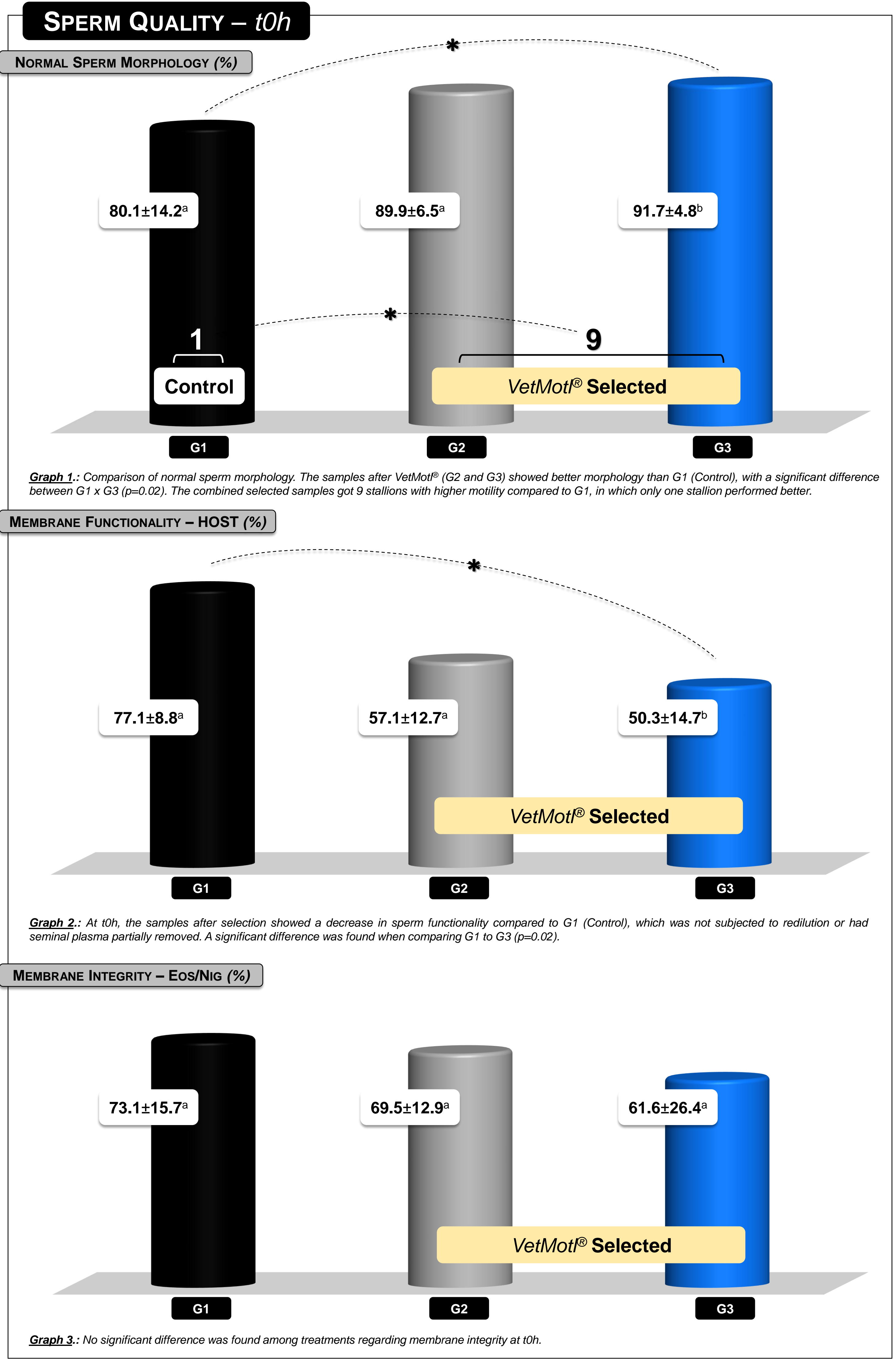
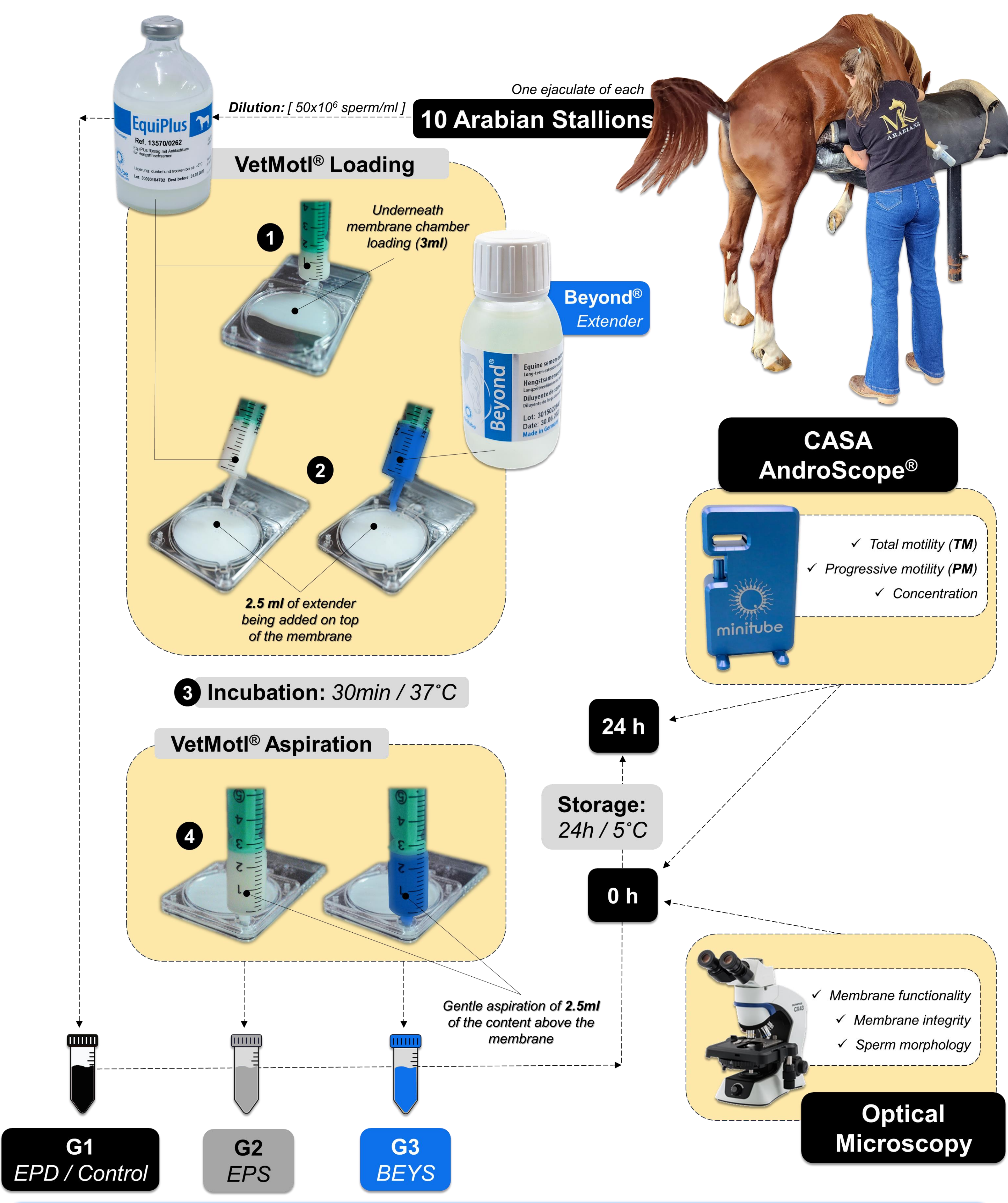
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INTRODUCTION

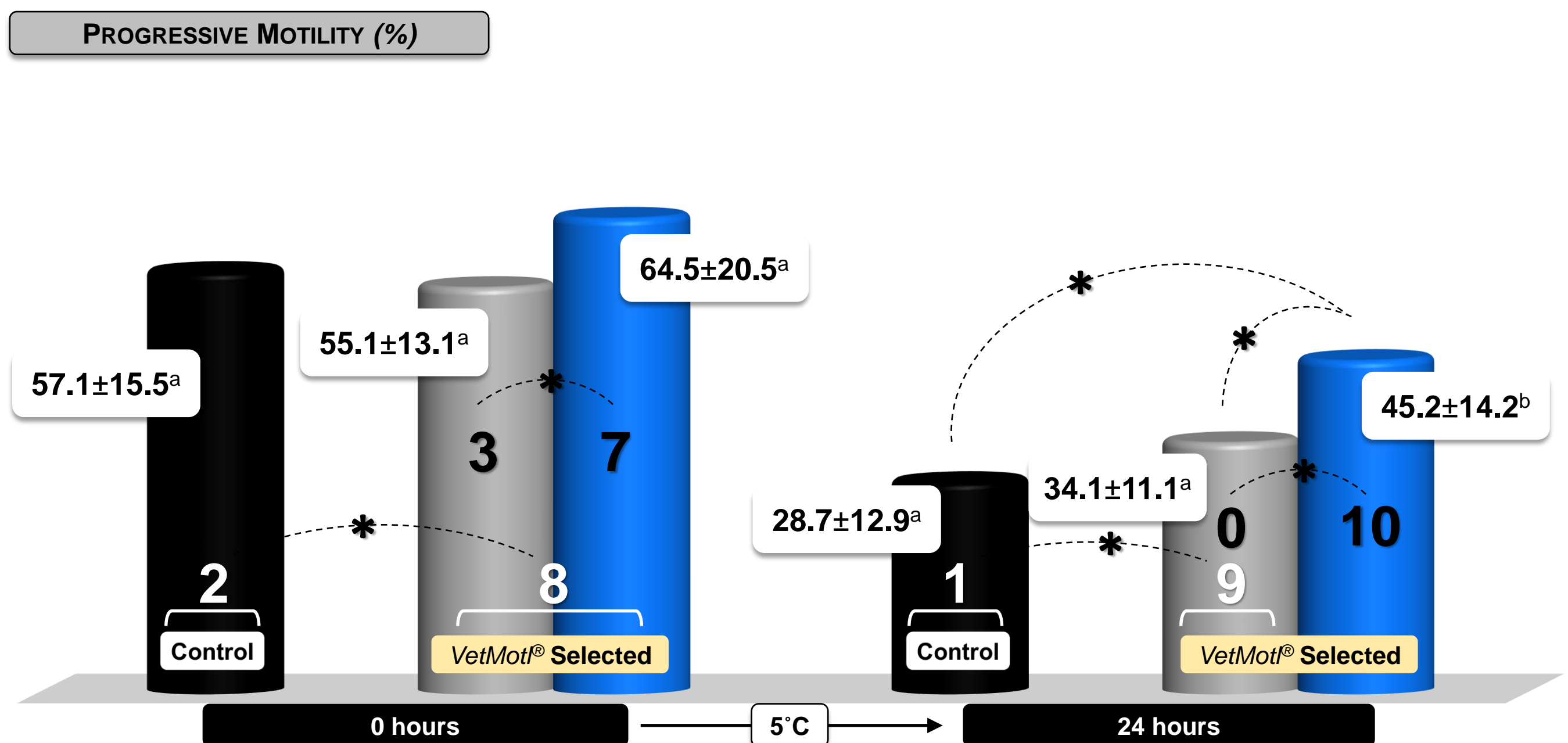
The microfluidic systems are widely used for selecting superior sperm cells for ICSI and IVF procedures. Recently, a larger device, the **VetMotl® Multi 3ml Equine**, has been launched. While it has demonstrated its effectiveness for selecting thawed semen, its effectiveness in selecting diluted fresh samples for storage at 5°C for 24 hours remains unknown. Recently, a new equine semen extender has also been developed, **Beyond® (Minitube)**, which is suggested to enhance sperm motility, allowing cold storage for up to 14 days. The aim of the present study was to assess whether selection with **VetMotl®** improves sperm quality and if sperm recovered and stored cooled with the newest extender formulation, instead of the traditional milk-based product, maintains the sample's quality.

MATERIAL & METHODS



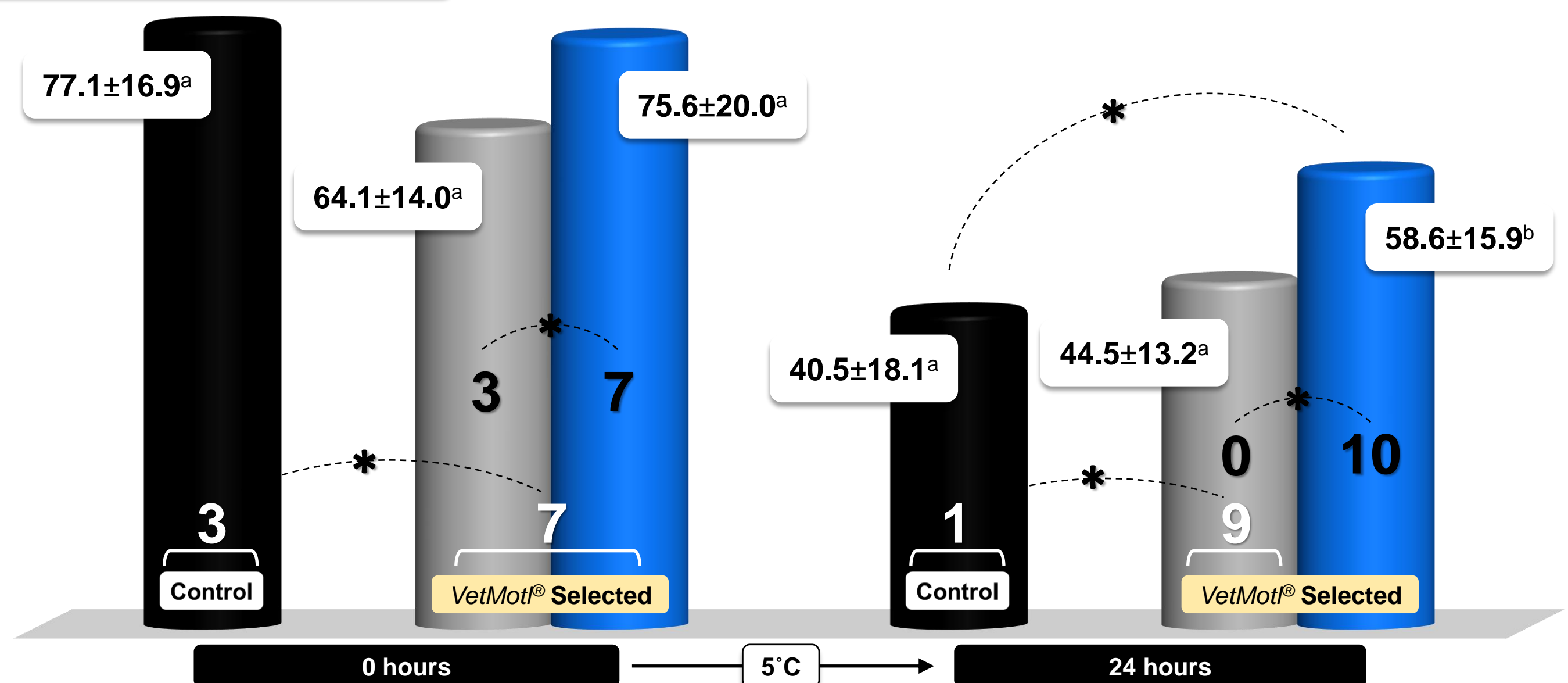
RESULTS & DISCUSSION

SPERM MOTILITY – t0h x t24h



Graph 4: The PM decreased in all treatments from t0 to t24h, storage (p<0.01). At t0h the treatments did not differ, while in t24h G3 has shown a better PM in comparison to G1 and G2 (p=0.02). The selected samples combined were better than Control at t0h (8x2) and G2 was better than G1 in t24h (9x1). G3 was better than G2 in t0h (7x3) and in t24h (10x0).

TOTAL MOTILITY (%)



Graph 5: The TM decreased in all treatments from t0 to t24h, storage (p<0.01). At t0h the treatments did not differ, while in t24h G3 has shown a better TM in comparison to G1 (p=0.04). The selected samples combined were better than Control at t0h (7x3) and G2 was better than G1 in t24h (9x1). G3 was better than G2 in t0h (7x3) and in t24h (10x0).

CONCLUSION

The **VetMotl® Multi 3ml - Equine** improved the sample's morphology, and the sperm selection helped to maintain sperm quality after 24 hours, probably due to the partial removal of seminal plasma and dead or damaged sperm. Additional benefits were observed in sperm motility when **Beyond®** was added instead of the milk-based extender, especially noticeable after storage, possibly due to its formula containing antioxidants and a unique combination of other compounds with antibiotics.