

INTRODUCTION

Rabbit sperm cryopreservation is still a great challenge;

- ✓ Many extenders and protocols have been tested, but there is no consensus about the best procedure yet.
- ✓ Normally 40-50% of sperm cells do not resist cryopreservation even with good protocols.
- ✓ Sperm from different males respond differently to the same cryopreservation protocol.
- ✓ Heat shock proteins (HSPs) have been reported to play a protective role against sperm cryo-injury.

MATERIALS AND METHODS

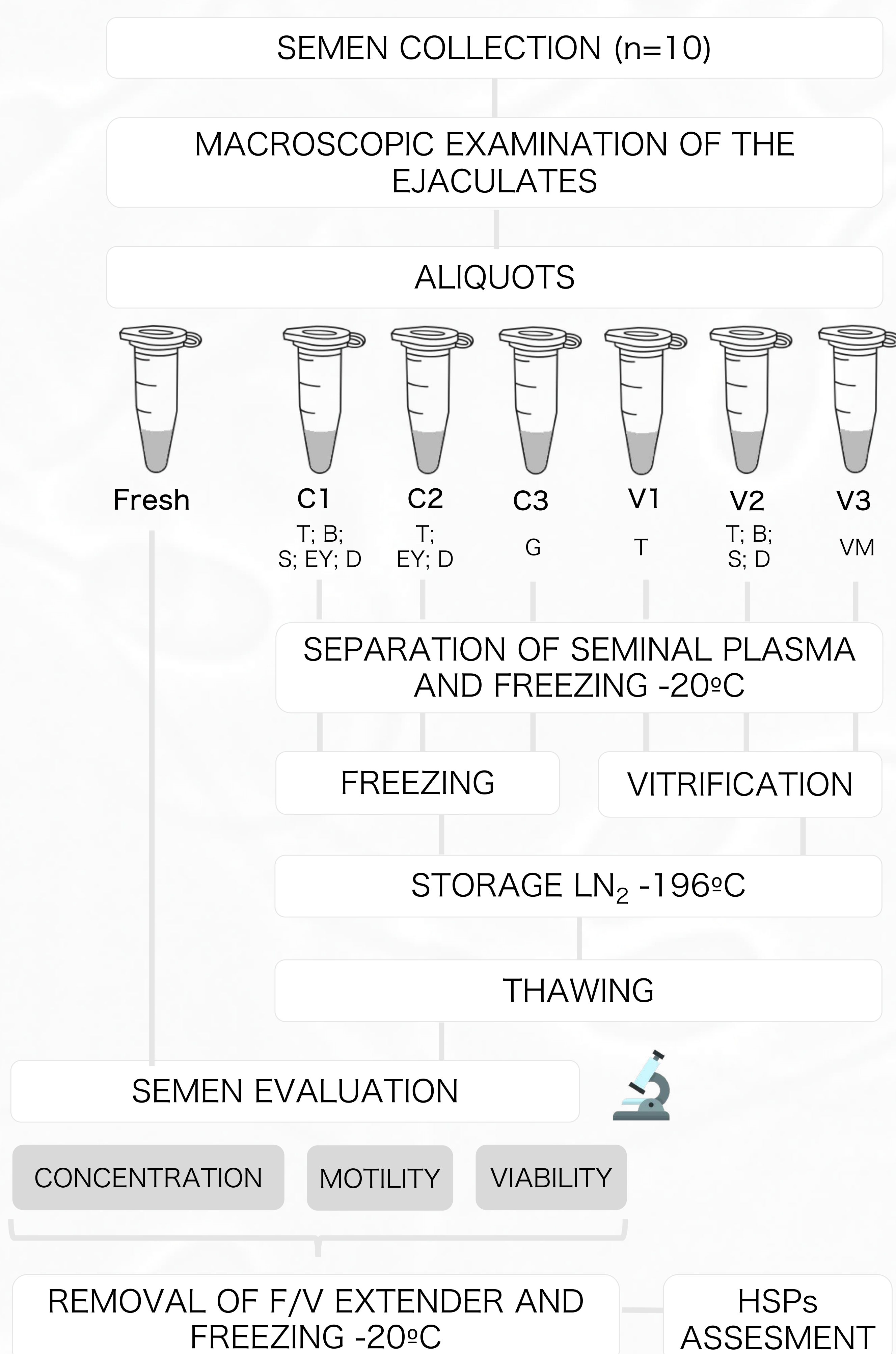


Fig. 1. Diagram of the cryopreservation process.

T: Tris-citric-glucose; B: Bovine Serum Albumin; S: Sucrose; EY: Egg Yolk; D: Dimethyl sulfoxide; G: Glycerol; VM: Vitrification Media

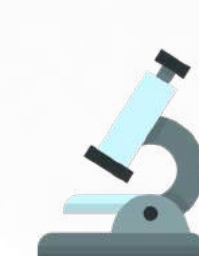
CONCLUSIONS

- ✓ Our cryopreservation protocols did not show enough efficiency on rabbit spermatozoa protection.
- ✓ Glycerol extender (C3) demonstrated to be the most efficient, contrary to previous findings.
- ✓ An interindividual difference was found in response to cryopreservation protocols.
- ✓ Further investigation is needed in search for cryo-injury markers such as HSPs that allow cellular modifications of spermatozoa, improving its survival after cryopreservation.

OBJECTIVES

This study aims to analyze;

- ✓ The effect of different extenders on rabbit sperm quality after freezing and vitrification protocols.
- ✓ The correlation between HSPs expression and the cryopreservation resistance of rabbit spermatozoa.
- ✓ The existence of differences in cryo-resistance between males and its relationship with differential HSP expression.



RESULTS

- ✓ Concentration, motility and viability decreased in all cryopreservation treatments.
- ✓ C3 and C2 showed best post-thawing results.

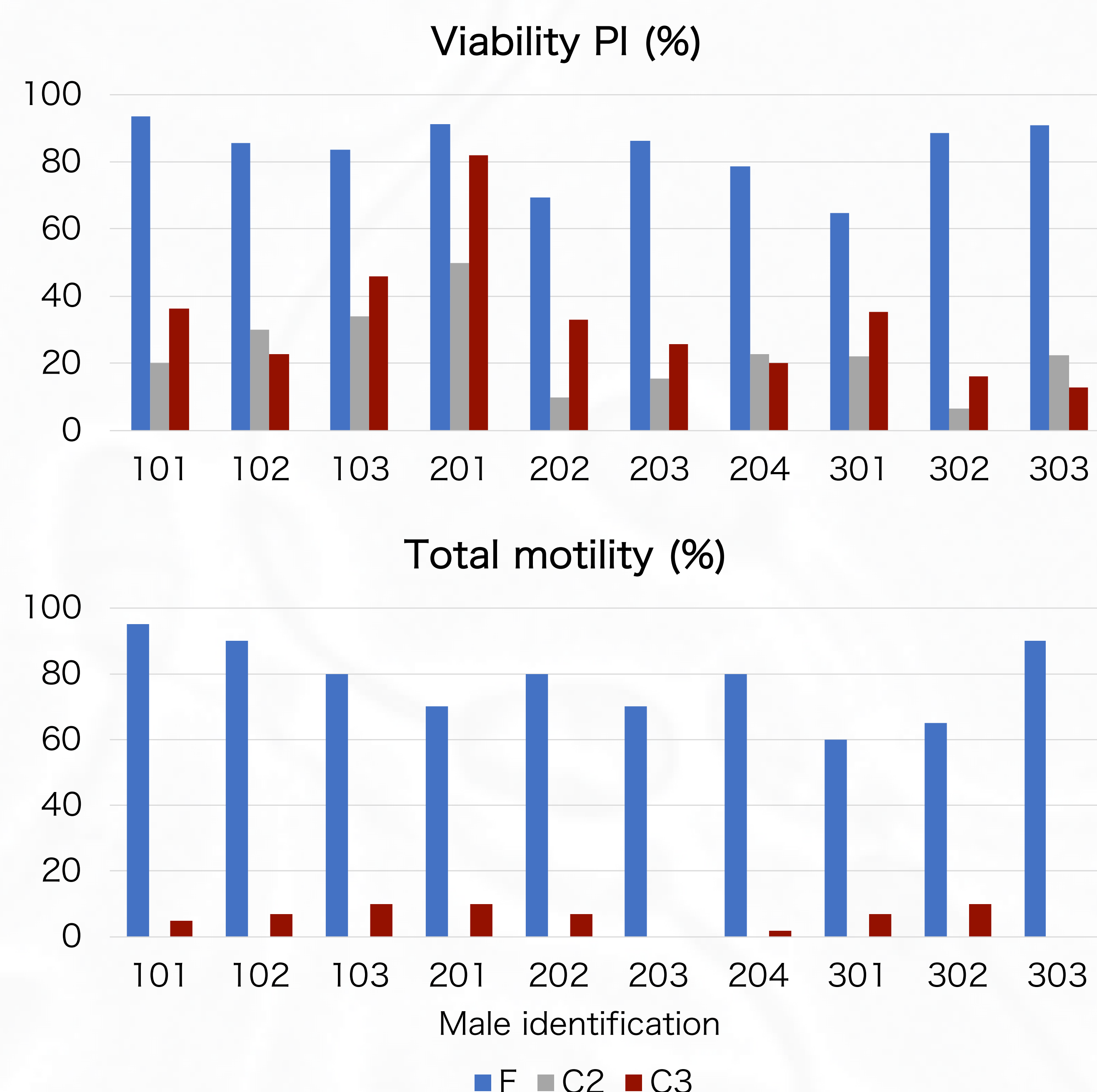


Fig. 2. Individual results of viability and motility of the best cryopreservation treatments

- ✓ Males showed high variability in their response to the same treatments.

- ✓ Fresh and C3 showed higher protein concentration in both males.

Fig. 3. Protein quantification plate

