

PureSperm® Wash - for washing sperm pellets

Introduction

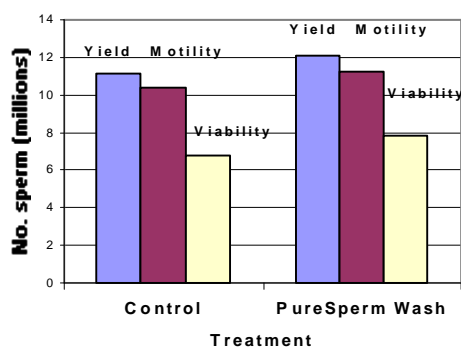
PureSperm® Wash is a balanced salt solution designed specifically for washing the sperm pellet after centrifugation on a **PureSperm®** density gradient. The purpose of this study was to compare **PureSperm® Wash** with other sperm washing solutions and to investigate its shelf life.

Experiments and results

Expt. 1: Comparison of **PureSperm® Wash** with fertilisation medium

Aliquots of liquefied ejaculates from unselected donors (n = 10) were prepared on **PureSperm®** density gradients. The sperm pellets were washed in either (i) commercially available medium (control); or (ii) **PureSperm® Wash**. A higher yield of motile, viable sperm was obtained from the treatment group (**PureSperm® Wash**) than from the control group (Figure 1).

Figure 1: Comparison of **PureSperm® Wash with a non-optimised medium for washing sperm (n =7).**



Expt. 2: Fertilisation study using sperm washed in **PureSperm® Wash** compared to sperm washed in supplemented Earles Balanced Salt Solution (EBSS).

Sperm pellets, prepared as in Expt 1, were washed in either (i) supplemented EBSS, or (ii) **PureSperm® Wash**. Oocytes from each of 15 patients were divided between the two treatment groups for IVF. The fertilisation rate and the number of good quality embryos were higher for the group fertilised with sperm washed in **PureSperm® Wash** than for the group fertilised with sperm washed in fertilisation medium (Table 1).

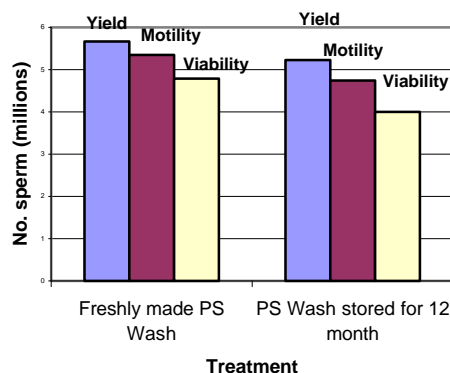
Table 1: Comparison of IVF results using sperm washed in (i) EBSS, and (ii) **PureSperm® Wash (n = 15 patients).**

	Fertilisation rate	Good Quality Embryos
EBSS	66/110 (60%)	35/66 (53%)
PS Wash	66/104 (63.5%)	43/66 (65%)

Expt 3: Shelf life of **PureSperm® Wash**

Sperm were prepared on **PureSperm®** density gradients as in Expt 1. The sperm pellets were washed in either (i) freshly made **PureSperm® Wash**, or (ii) **PureSperm® Wash** prepared 12 months previously and stored at room temperature in the unopened bottle. Sperm preparations were analysed for sperm concentration, proportion of motile sperm (subjective analysis) and proportion of viable sperm (nigrosin and eosin staining). The results were not different between the two batches.

Figure 2: Comparison of freshly made versus stored batches of **PureSperm® Wash (n = 8).**



Conclusions

- 1) Washing the sperm pellet in **PureSperm® Wash** after a **PureSperm®** gradient provides a high yield of motile sperm, viable sperm.
- 2) The fertilisation rate and zygote development were better for sperm washed in **PureSperm® Wash** than those washed in supplemented EBSS.
- 3) **PureSperm® Wash** has a shelf life of a least 12 months at room temperature in the unopened bottle.



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