



A Novel One Step Sperm Wash Product

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A continuous gradient sperm wash product containing arabinogalactan, Sperm Concept (sold as IsoCare One Step) was compared against a Percoll wash in 3 experiments.

Experiment 1

In Expt. 1, fresh semen from 4 men was divided and washed either in SC or 80% Percoll (P) for 30s at 300 x g. Pellets were then washed again in media alone and sperm evaluated. All data are expressed below as mean SEM for SC versus P.

There was no difference in the % motility for recovered sperm (83.4% vs 83.3%), the motility of sperm cultured for 24 h (64.6% vs 75.6%) or in the numbers of sperm recovered ($p=0.6$). Based on animal model data showing a lack of toxicity of SC to sperm throughout the IVF process, the next 2 experiments were done on sperm removed directly from the SC pellet, without a second media wash step.

Experiment 2

In Expt. 2, SC was compared to bilayer P (90%:45%), to wash fresh semen from 8 men. The % normal morphology (83.3% vs 81.1%) and motile sperm (74.6% vs 76.3%) did not differ between treatments.

Both treatments improved ($p<0.09$) these parameters over that found for prewashed sperm morphology (72.2%) and motility (62.5%). The % of motile sperm recovered tended to be higher ($p=0.1$) after SC wash (93.5% vs 80.5%).

Experiment 3

In Expt. 3, semen from 12 men with fertility disorders was evaluated after washing in SC or P. There was no difference in motility of recovered sperm (59.12% vs 60.16%); however, normal membrane function (hypo-osmotic swell test) was better ($p=0.045$) in SC (70.13% vs 46.10%).

Hamster egg SPA was also done on sperm washed from 4 donors in both SC and P. There was no difference in % eggs penetrated (41.2% vs 40.2%) or in the penetration factor (0.48 0.02 vs 0.41 0.03). One man did show a 30% improvement using SC versus P. The SC product is made from a polysaccharide approved for human consumption. It offers a non-toxic one step wash alternative to Percoll.