SwimCount™ HARVESTER

A sperm purification device that mimics the natural selection of the best Progressive Motile Sperm Cells (PMSCs), with very few manipulation steps. The PMSCs recovered show improved sperm quality parameters, especially an increased number of PMSCs with a very low DNA Fragmentation and a better Morphology.

Density Gradient Centrifugation Method (DGC)							SwimCount™ Harvester Method							Differences SwimCount™ Harvester vs. DGC			
No. of steps performing the DGC (Density Gradient Centrifugation)	Description of each step and activity	No. of Seconds and Minutes	Description and special mentioning of the steps where a Transfer of the Sample takes place	Risk Factor from 1-5 (5 being most difficult)	Weight in %	Weigthed Value	No. of steps performing the SwimCount™ Harvester	Description of each step and activity	No. of Seconds and Minutes	Description and special mentioning of the steps where a Transfer of the Sample takes place (none for the SwimCount™ Harvester)	Risk Factor from 1-5 (5 being most difficult)	Weight in %	Weigthed Value	No. of Seconds-difference between SwimCount™ Harvester and DGC in %	No. of Minutes difference between SwimCount™ Harvester and DGC	Risk Factor between SwimCount™ Harvester and DGC in %	Risk Factor between SwimCount™ Harvester and DGC in Factor
1	Preparation of gradient culture medium	20	The two layers of gradient medium (40 and 80) are carefully layered on top of each other	1	1%	0,01	1	Inject sperm sample into the device	20	1 mL sample is transferred to the SwimCount™ Harvester	1	25%	0,25				
2	Carefully dispense up to 2 mL of liquefied semen sample on top of the prepared gradient	1200	Care may be taken not to overload the gradient as this may result in a poor sperm yield	4	1%	0,04	2	Add sperm preparation medium into the device	20	0.8 mL Sperm Preparation Medium is trasferred to the SwimCount™ Harvester	1	25%	0,25				
3	The gradient is centrifuged at 300 x g to 400 x g for 15-20 Minutes	20		1	1%	0,01	3	30 Minutes Incubation time	1800		1	25%	0,25				
4	Remove the supernatant from the pellet	20		1	1%	0,01	4	Aspirate 0.8 mL of the purified semen sample from the device	20	Aspirate the Progressive Motile Sperm Cells and transfer to XX	1	25%	0,25				
5	Transfer the pellet with a new sterile tip into a clean conical centrifuge test tube containing 3-5 mL of sperm wash medium	20	Attention make sure test tubes are labelled correctly when trasfering material between different test tubes	5	30%	1,50											
6	Mixing	20		2	2%	0,04											
7	Centrifuge at 200 x g to 300 x g for 5-10 Minutes	600		3	5%	0,15											
8	Aspirate and remove most of the supernatant.	20		2	1%	0,02											
9	Transfer the pellet with a new sterile tip into a clean conical centrifuge test tube containing 3-5 mL of sperm wash medium	20	Attention make sure test tubes are labelled correctly when trasfering material betwen different test tubes	3	25%	0,75											
10	Mixing	20		3	1%	0,03											
11	Centrifuge at 200 x g to 300 x g for 5-10 Minutes	600		1	1%	0,01											
12	Aspirate and remove most of the supernatant	20		2	1%	0,02											
13	Resuspend	20	Attention make sure test tubes are labelled correctly when trasfering material betwen different test tubes	5	30%	1,50											
	Total Number of Steps	**13**						**Total Number of Steps**	**4**								
	Total Amount of Seconds	2600						Total Amount of Seconds	1860								
	Total Amount in Minutes	**43**						**Total Amount in Minutes**	**31**					**-28%**	**-12**		
	Total Hands-On Time	**10**						**Total Hands-On Time**	**3**					**-70%**	**-7**		
	Total Numerical Risk Value			**33**				**Total Numerical Risk Value**			**4**					**-88%**	**-29**
	Total Weigth in % of each Step (Check)				100%			Total Weigth in % of each Step (Check)				100%					
	Weighthed Risk Factor					**4**		**Weighthed Risk Factor**					**1**			**-76%**	**-3**