



GM501 SpermAir is a ready-to-use medium designed for sperm washing, swim-up techniques and density gradient centrifugation, as well as for testicular tissue.

### GM501 SpermAir Instructions for Use

- Warm to 37°C prior to use. GM501 SpermAir is HEPES buffered thus incubation in a CO<sub>2</sub>-incubator will lower the pH.
- Any laboratory procedures described herein are recommendations only. Each laboratory must establish and validate its own procedures for preparation and use.

### GM501 SpermAir Composition

- NaCl, KCl, KH<sub>2</sub>PO<sub>4</sub>, MgSO<sub>4</sub> CaCl<sub>2</sub>
- Bicarbonate, HEPES, EDTA
- Glucose, Lactate, Pyruvate
- Non-essential and essential Amino Acids, Alanyl-Glutamine
- Human Serum Albumin, Gentamicin, Phenol Red

### GM501 SpermAir Specifications

pH (at 37°C, 6% CO <sub>2</sub> )	7.20 - 7.50
Osmolality (mOsm/kg)	270 - 290
Sterility (sterile/SAL 10 <sup>-3</sup> )	No Growth
Endotoxins (LAL, EU/ml)	< 0.25
Human Sperm Survival Assay (HSSA)	≥80% of Control Motility at 24h

Part #	Size	Storage	Shelf life*
4 GM 501AIR+PR+G-20	1 x 20 ml	2 - 8°C	6 months
4 GM 501AIR+PR+G-50	1 x 50 ml	2 - 8°C	6 months

\*From the date of manufacture

- Ready-to-use
- CO<sub>2</sub> incubation not required
- HEPES (21mM) and bicarbonate buffered
- Suitable for washing, swim-up and density gradient centrifugation
- For handling of testicular tissue
- Contains Gentamicin (10 mg/liter) and Phenol Red
- Includes highest available purity (Ph. Eu./USP) Human Serum Albumin (5.00 g/liter)
- Can be used safely for up to 7 days after opening when stored at 2 - 8°C and sterile conditions are maintained
- A Certificate of Analysis for each batch is available at [hamiltonthorne.com](http://hamiltonthorne.com)

### GM501 SpermAir Intended Use

GM501 SpermAir is intended for the handling and preparation of sperm for use in assisted reproduction procedures. GM501 SpermAir is not intended for use in intrauterine insemination (IUI) procedures.

# GM501 SpermAir

## Direct Swim-Up

### Media

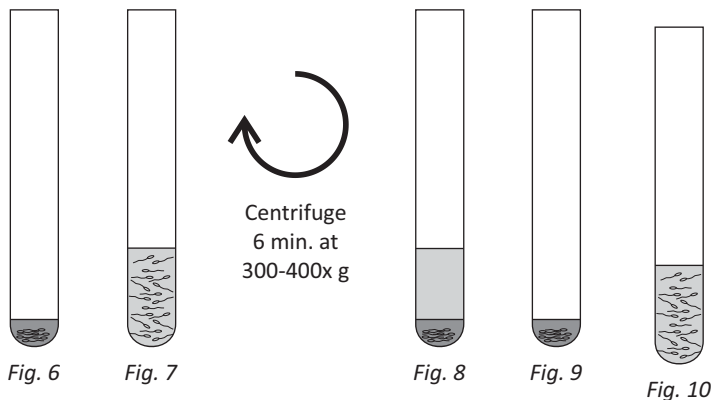
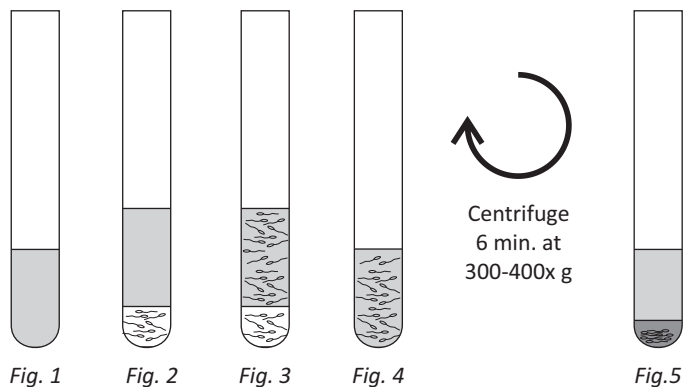
The below protocol reflects the use of GM501 SpermAir for Direct Swim-up.

### Swim-Up

- 1) Transfer 2 ml of warmed GM501 SpermAir into a new conical centrifuge tube (Fig. 1).
- 2) Underlay with 1 ml of liquified semen (Fig. 2).
- 3) Place cap on tube but do not tighten and warm to 37°C for 1 hour (Fig. 3).

### Washing

- 1) Without dispersing the lower layer, aspirate the upper media layer containing the motile sperm and transfer to a conical centrifuge tube (Fig. 4).
- 2) Centrifuge at 300-400x g for 6 minutes (Fig. 5).
- 3) Without dispersing the pellet, aspirate and discard the supernatant (Fig. 6).
- 4) Resuspend the pellet in 1 ml of warmed GM501 SpermAir medium (Fig. 7).
- 5) Centrifuge at 300-400x g for 6 minutes (Fig. 8).
- 6) Without dispersing the pellet, aspirate and discard the supernatant (Fig. 9).
- 7) Repeat Steps 4 through 6 (Fig. 7 - 9).
- 8) **For IVF:** Resuspend the pellet in 0.1 - 1.0 ml of equilibrated culture medium.  
**For ICSI or Insemination:** Resuspend the pellet in warmed GM501 SpermAir.



## Indirect Swim-Up

### Media

The below protocol reflects the use of GM501 SpermAir for Indirect Swim-up.

### Washing 1

- 1) Transfer 5 ml of sperm washing media into a conical centrifuge tube.
- 2) Add 1.0 to 3.0 ml of liquified semen and mix well (Fig. 1).
- 3) Centrifuge at 300-400x g for 10 minutes (Fig. 2).
- 4) Aspirate the supernatant and discard (Fig. 3).

### Swim-Up

- 1) Overlay the pellet with 2ml of warmed GM501 SpermAir medium (Fig. 4).
- 2) Place cap on tube but do not tighten and warm to 37°C for 1 hour (Fig. 5).
- 3) Aspirate the supernatant containing the motile sperm and transfer to a conical centrifuge tube (Fig. 6).

### Washing 2

- 1) Add 1 ml of warmed GM501 SpermAir to the aspirated supernatant (Fig. 7).
- 2) Centrifuge at 300-400x g for 6 minutes (Fig. 8).
- 3) Without dispersing the pellet, aspirate and discard the supernatant (Fig. 9).
- 4) Repeat Steps 1 through 3 (Fig. 7 - 9).
- 5) **For IVF:** Resuspend the pellet in 0.1 - 1.0 ml of equilibrated culture medium.  
**For ICSI or Insemination:** Resuspend the pellet in warmed GM501 SpermAir.

