SupraSperm® 90
SupraSperm® 100
SupraSperm® System

Product No.:
1091
1092
1097

Customer Service:
E-mail: customerservice.medicult@origio.com
Tel: +45 46 79 02 02 • Fax: +45 46 79 03 02

ORIGIO a/s
Knardrupvej 2, DK-2760 Måløv, Denmark
www.origio.com
Tel: +45 46 79 02 00 • Fax: +45 46 79 03 00
SupraSperm® 90, SupraSperm® 100, SupraSperm® System

**Intended use**
SupraSperm® is for the isolation of viable spermatozoa by the density gradient method.

**Composition**

**SupraSperm® 90:**
90% Salt solution of colloidal silica particles coated with silane.
10% Sperm Preparation Medium, which consists of Earle's Balanced Salt Solution (EBSS) supplemented with: Synthetic Serum Replacement (SSR®) (USA; ART Supplement)
Human serum albumin (HSA)
Sodium pyruvate
Sodium bicarbonate
HEPES
Gentamicin sulphate 10µg/mL
Phenol red

**SupraSperm® 100:**
100% Salt solution of colloidal silica particles coated with silane.
Without phenol red.

**SupraSperm® System – 55%:**
55% Salt solution of colloidal silica particles coated with silane.
45% Sperm Preparation Medium with phenol red.

**SupraSperm® System – 80%:**
80% Salt solution of colloidal silica particles coated with silane.
20% Sperm Preparation Medium with phenol red.

**Quality control testing**
Sterility tested (Ph.Eur., USP)
Osmolality tested (Ph.Eur., USP)
PH tested (Ph.Eur., USP)
Endotoxin tested ≤ 0.1 EU/mL (Ph.Eur., USP)
Not Mouse Embryo Assay (MEA) tested
Sperm Survival tested

**Storage instructions and stability**
Store in original container at 2-8°C, protected from light.
Do not freeze.
Discard excess (unused) media following warming
The product is to be used within 7 days after opening. When stored as directed by the manufacturer the product is stable until the expiry date shown on the vial label.

**Precautions and warnings**
Do not use the product if:
1. Product packaging appears damaged or if the seal is broken.
2. Expiry date has been exceeded.

**Caution:** All blood products should be treated as potentially infectious. Source material used to manufacture this product were tested and found non-reactive for HbsAg and negative for Anti-HIV-1/2, HIV-1, HBV, and HCV. Furthermore source material have been tested for parvovirus B19 and found to be non-elevated. No known test methods can offer assurances that products derived from human blood will not transmit infectious agents.

**Preparation of semen sample**

1. Thawed semen that has been frozen in liquid nitrogen.
2. Liquefied semen samples at 37°C (±1°C) in a waterbath or incubator.
3. Caps of the vials should be tightened to minimize air exposure and prevent evaporation.
4. Liquefied semen samples should be used within 4-6 hours after liquefaction, or stored at room temperature for no more than 24 hours before use.

**Instructions for use**

**SupraSperm® System:**
2 x 1 mL of semen sample should be used to run two gradients for each semen sample. Dispense 2 mL 55% SupraSperm® to a centrifuge tube. Use pipette to dispense 2 mL 80% SupraSperm® underneath the first solution. Carefully dispense 1 mL semen sample on top of the prepared gradient. Spin the gradients in a centrifuge at 300 x g for 20 minutes. Remove the supernatant from the pellet and place the pellet in a clean centrifuge tube. Transfer the sperm pellet with as little of the 80% Medium as possible into a clean centrifuge tube. When the caps of the tubes are tightened the prepared semen can be kept at room temperature (20-25°C) for up to one hour prior to insemination. It is recommended that the sperm samples be wrapped in aluminium foil. Alternatively the unwrapped sperm sample can be stored in a CO₂ environment at 37°C.

**Calculation formula for preparing of own gradients**

\[
\text{Gradient} \% = \left( \frac{X}{X + Y} \right) \times 100\%
\]

**SupraSperm® 100:**
Gradients are prepared by using SupraSperm® 100:
- Use Sperm Preparation Medium as diluent for SupraSperm® 100.
- For custom gradient preparation use the formula below to prepare a chosen gradient, using SupraSperm® 100 + Sperm Preparation Medium (Product No.1069/1070).

**Calculation formula for preparing of own gradients**

\[
\text{Gradient} \% = \left( \frac{X}{X + Y} \right) \times 9.0 \times 100\%
\]

**SupraSperm® 90:**
Gradients are prepared by using SupraSperm® 90:
- Use Sperm Preparation Medium as diluent for SupraSperm® 90.
- For custom gradient preparation use the formula below to prepare a chosen gradient, using SupraSperm® 90 + Sperm Preparation Medium (Product No.1069/1070).

**Calculation formula for preparing of own gradients**

\[
\text{Gradient} \% = \left( \frac{X}{X + Y} \right) \times 0.9 \times 100\%
\]

**Precautions and warnings**
1. The semen sample is thoroughly mixed (i.e. repeated tilting for 20 minutes at room temperature). If the sample does not liquefy, you may need to pass it through a narrow pipette and/or mix it with a small amount of pre-equilibrated Sperm Preparation Medium.
2. Gradients should be prepared immediately before use for optimal results.
3. The mixing process is completed, sperm concentration and motility should be assessed.
4. Carefully dispense 1 mL of liquefied semen sample on top of the prepared gradient. NOTE: Adding too much sperm will result in overloading and poor separation.
5. The gradient is centrifuged at 300 x g for 20 minutes.
6. Remove the supernatant from the pellet and take care not to leave any residues on the tube wall. Transfer the sperm pellet with as little of the 80% solution as possible into a clean centrifuge tube.
7. Resuspend the pellet in 5 mL of pre-equilibrated Sperm Preparation Medium and centrifuge again at 300 x g for 10 minutes. Aspirate the supernatant. Repeat this washing procedure.
8. Add a small amount of pre-equilibrated Sperm Preparation Medium and determine motility and concentration of spermatozoa in the washed sample.
9. Finally, resuspend the washed sperm in a suitable volume of pre-equilibrated Sperm Preparation Medium. In normal circumstances, fertilization will occur if IVF insemination is performed in a final concentration of 100.000 motile spermatozoas/mL.

**NOTE!** Centrifuge times can be changed to 15 minutes in all steps if you have several sperm samples in one day and no possibility of running them all in parallel.
When the caps of the tubes are tightened the prepared semen can be kept at room temperature (20-25°C) for up to one hour prior to insemination. It is recommended that the sperm samples be wrapped in aluminium foil.

**Instructions for use (Density gradient)**

1. From each semen sample prepare a separate gradient for each 1 mL volume. Each gradient is prepared using 1-2 mL of 55% SupraSperm® underlaid with 1-2 mL of 80% SupraSperm®, and pre-equilibrated in a CO₂ environment at 37°C.