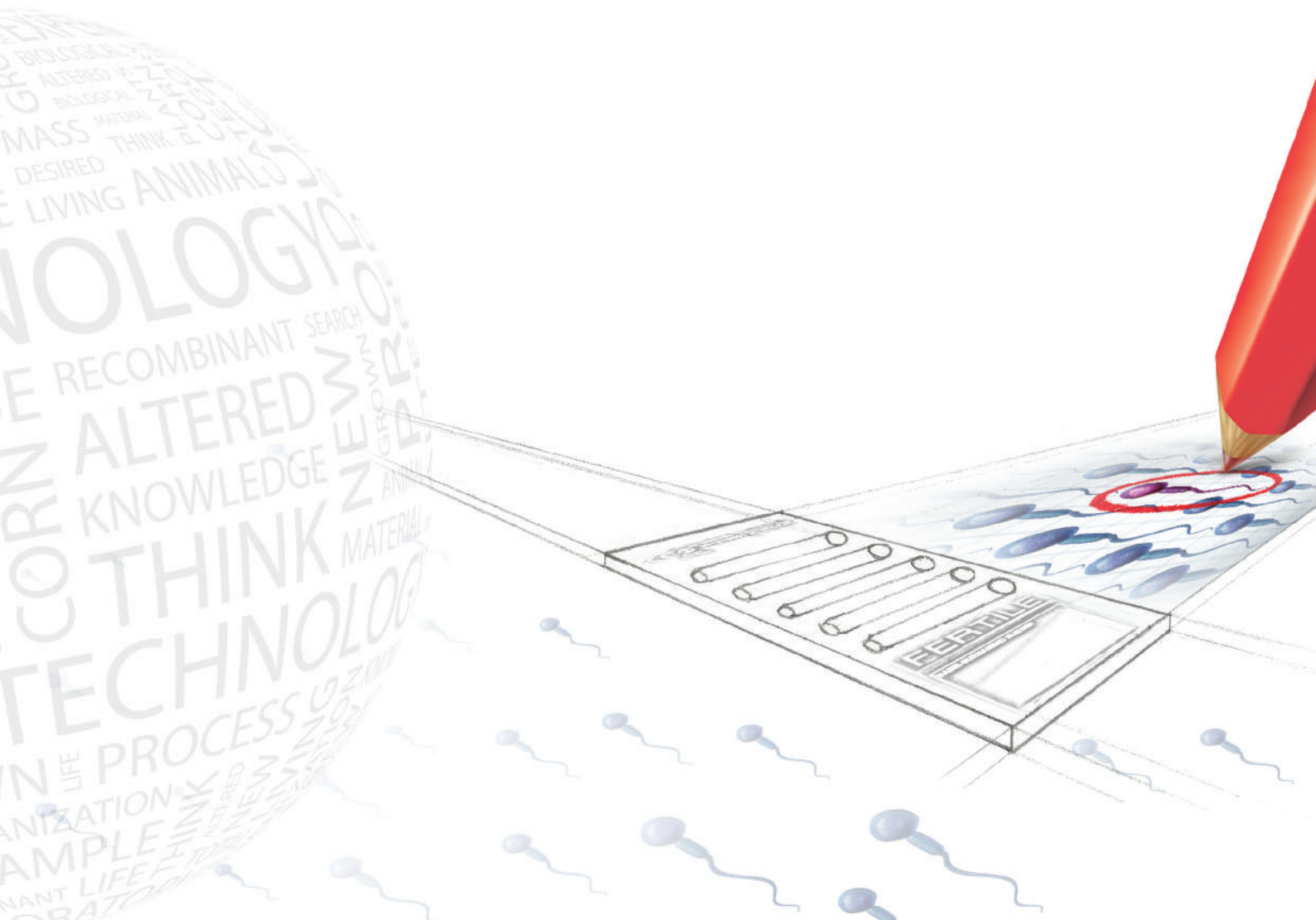
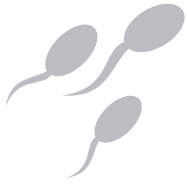


FERTILE[®]

MICROFLUIDIC SPERM SORTING CHIPS





DESIGN

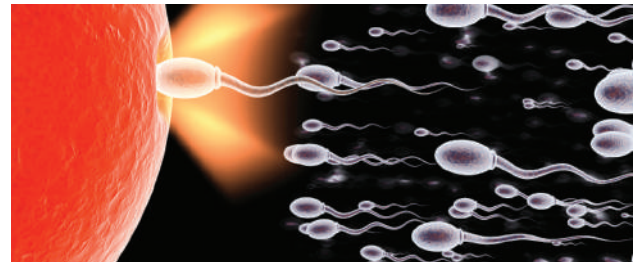
The FERTILE® is a flow and chemical free microfluidic single-use "chip" having an inlet sample chamber connected to an outlet collection chamber by a microfluidic channel. An untreated semen sample is pipetted into the inlet chamber and the sorted sperm are collected from the outlet. Sperm are sorted by the separation of healthy motile sperm from the many compromised sperm present in the semen. The FERTILE® does not require any pretreatment of the semen sample. The FERTILE® eliminates the use of procedures such as centrifugation and vortex mixing that cause irreparable damage to sperm. The sorted sperm exhibit better morphology, less DNA fragmentation and lower levels of reactive oxygen species (ROS) than the original sample(1,2). DNA damage has been shown to be associated with IUI and IVF failure(3).

The FERTILE® is a user friendly, rapid, efficient complete platform that eliminates the need for extensive user training or extended process times.



The FERTILE® is designed to deliver the sorted sperm at the appropriate concentration and volume for ICSI.

FERTILE® is manufactured with biocompatible materials, gamma irradiated and designed for safe handling and manipulation.



FERTILE® ADVANTAGES

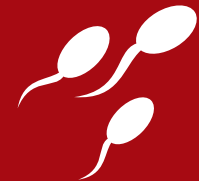
- FERTILE® is designed to sort healthy motile sperm for use in ICSI (Intracytoplasmic sperm injection).
- FERTILE® eliminates sperm damaging procedures associated with sperm washing, swim-up and gradient centrifugation.
- FERTILE® does not require any pretreatment of the semen sample. Thereby, reducing the risk of contamination.
- FERTILE® is user friendly and rapid; providing excellent yield within 30 minutes and eliminates the long prep times inherent to other methods
- Sperm within the inlet and outlet chambers can be observed with a simple light microscope. This provides a quick and efficient means of monitoring the process.





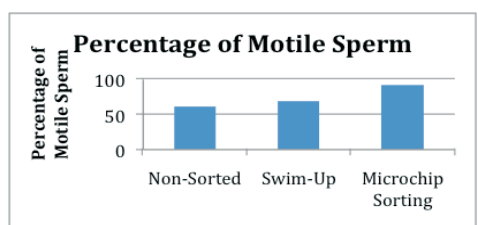
FERTILE[®] AREA OF USAGE

- Assisted Reproductive Technology Laboratories
- Andrology and Embryology Laboratories

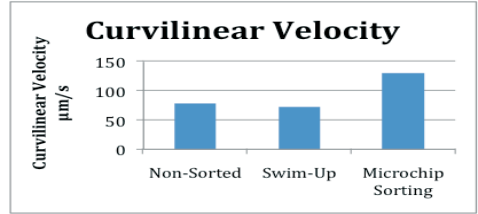


FERTILE[®]
MICROFLUIDIC SPERM SORTING CHIPS

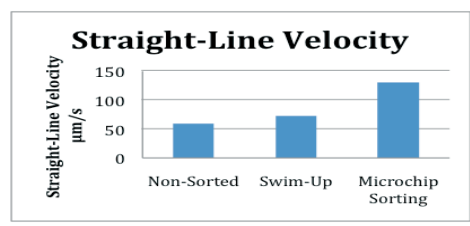
PERFORMANCE EVALUATION



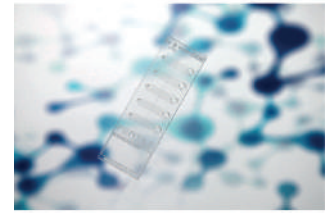
Percentage of motility
There is a significant difference in motility between the unsorted sperm and the sorted sperm indicative of the sorting capability of the FERTILE[®]



Sperm Velocity Evaluation
After sorting with FERTILE[®], collected sperm have more than 1.5 times the curvilinear velocity compared to unprocessed semen (4).



After sorting with FERTILE[®], collected sperm have more than 3.8 times the straight-line velocity compared to unprocessed semen (4).



FERTILE®

MICROFLUIDIC SPERM SORTING CHIPS



CERTIFICATES

TSE EN ISO 9001:2008 QUALITY MANAGEMENT SYSTEM CERTIFICATION
TSE EN ISO 13485:2012 MEDICAL DEVICES – QUALITY MANAGEMENT SYSTEMS CERTIFICATION
COUNCIL DIRECTIVE 93/42/EEC (CE) CERTIFICATION

PATENT INFORMATION

Harvard University Medical School & Massachusetts Institute of Technology (MIT) patented instrument
Patent No.:WO/2012/162181

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3. Brown, D.B., et al., Evaluating a novel panel of sperm function tests for utility in predicting intracytoplasmic sperm injection (ICSI) outcome. Journal of assisted reproduction and genetics, 2013: p. 1-17.
4. Tasoglu, S., et al., Exhaustion of Racing Sperm in Nature-Mimicking Microfluidic Channels During Sorting. Small, 2013.
5. Waseem A., et al., Space constrained human sperm sorting with applications in reproductive medicine, 2013.
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7. <http://www.klinikembriyoloji.com/>
8. TSE EN ISO 13485:2012

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