

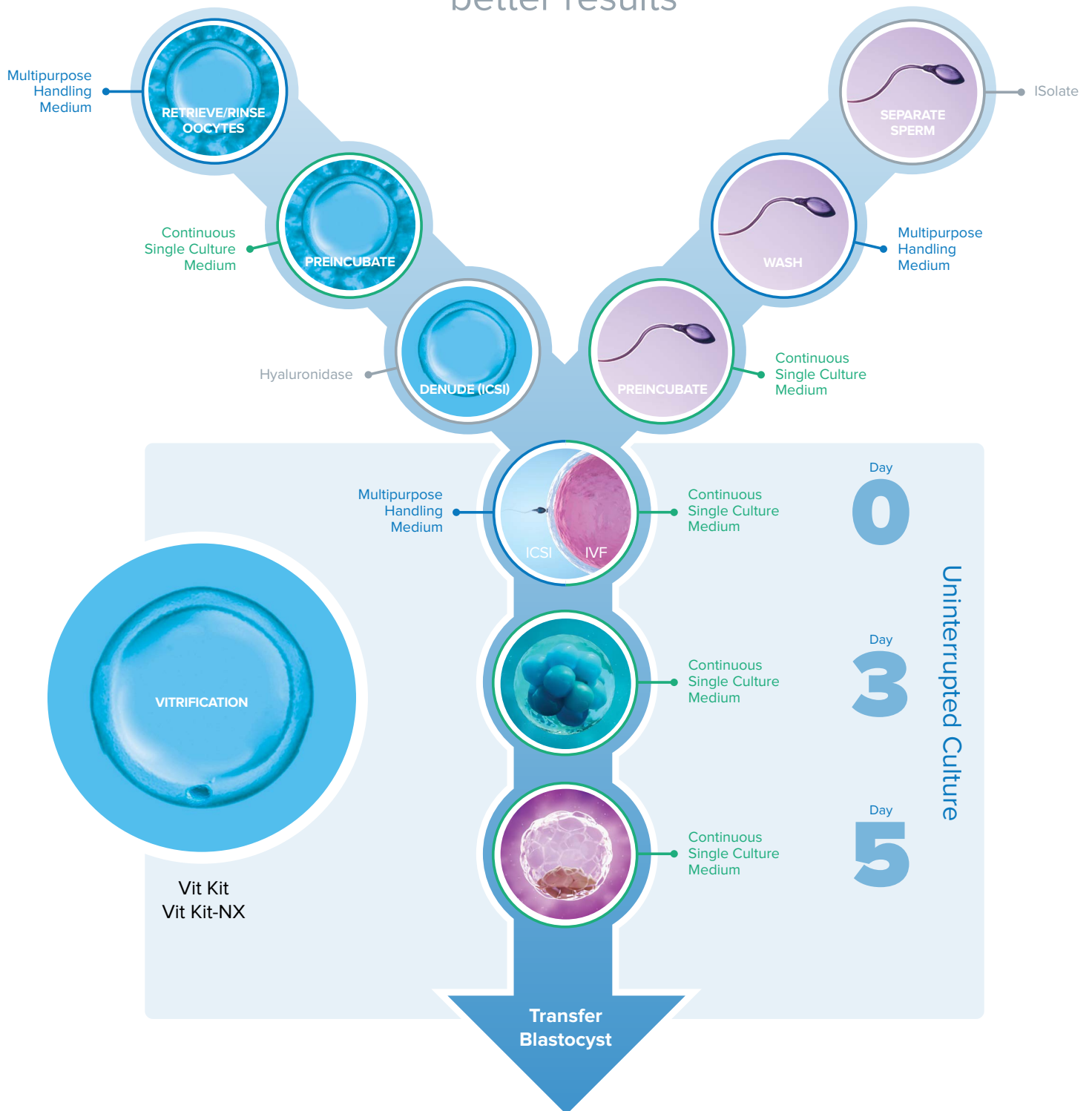


# From Gametes to Blastocysts

SIMPLER PROCESSES, LESS STRESS, BETTER RESULTS.

# Help at Every Step

Simpler processes,  
less stress, and  
better results



# Leading The Way to Greater Workflow Efficiency and Increased Pregnancy Rates

FUJIFILM Irvine Scientific has been a well-recognized supplier of innovative media solutions and lab supplies to the ART community for almost 30 years.

Media solutions, such as ISolate for sperm preparation and Freezing Medium TYB for cryopreservation, have set industry standards in the field of andrology. FUJIFILM Irvine Scientific pioneered the use of vitrification to increase survival rates of cryopreserved oocytes and embryos with Vit Kit and Vit Kit-NX.

Today, with a new generation of optimized, multi-use media, Multipurpose Handling Medium and Continuous Single Culture, FUJIFILM Irvine Scientific continues to increase workflow efficiency and contribute to successful pregnancies in clinics throughout the world.

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## From Gametes to Blastocysts

- Help to improve workflow efficiency and clinical outcomes in a fully integrated workflow
- Reduce stress on the embryo and the embryologist
- Handle gametes and embryos in a stable environment
- Enhance performance with high quality products

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Learn about the latest FUJIFILM Irvine Scientific solutions for reproductive technologies in our brochures:

- From gametes to blastocysts
- Vitrification of oocytes and embryos
- Sperm preparation, handling and storage

Visit our website at [www.irvinesci.com](http://www.irvinesci.com)

## Peace of Mind at Every Step

FUJIFILM Irvine Scientific was the first ART manufacturing company in the USA to receive ISO 13485:2016 quality system certification, the rigorous international quality assurance standard designed specifically for Medical Devices. Every FUJIFILM Irvine Scientific product is subject to a stringent Quality System, unrivaled in the industry, and produced in well-established, cGMP compliant facilities.

# Reduce Stress

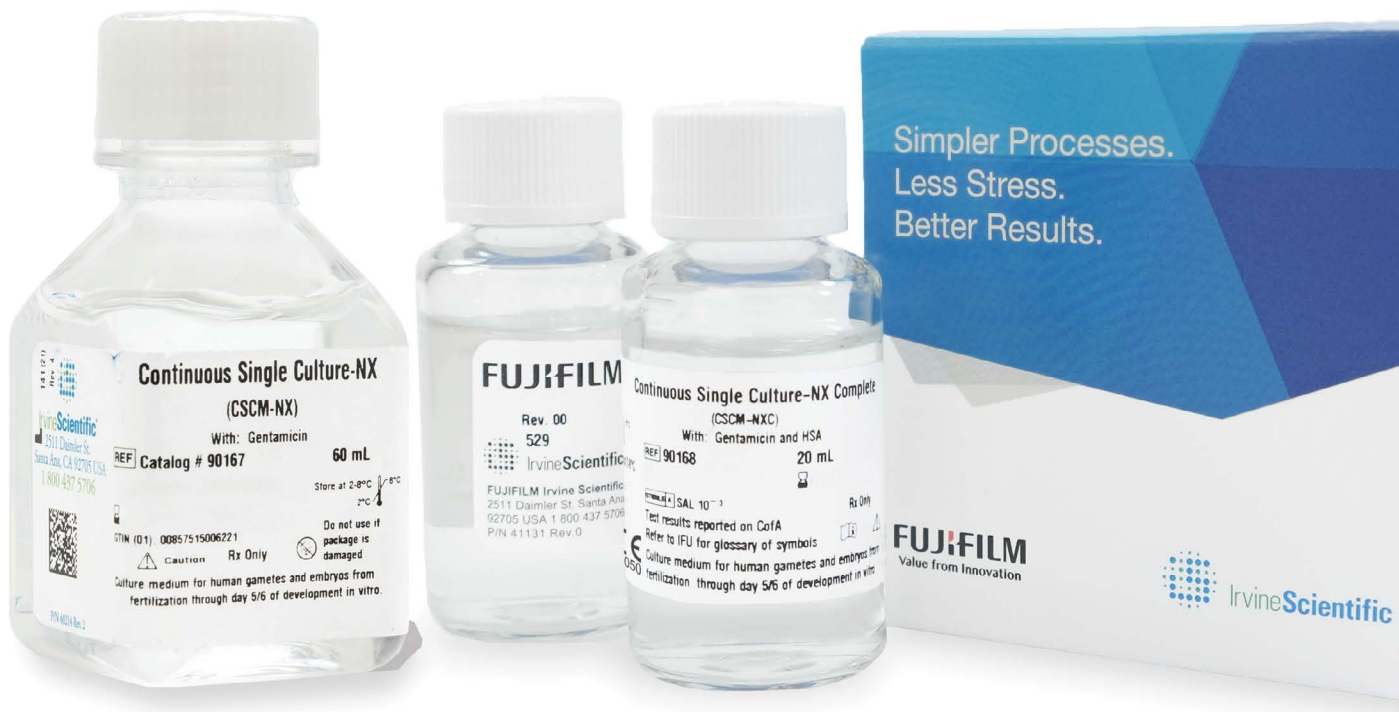
## on the embryo and the embryologist

Continuous Single Culture-NX provides an optimal environment for embryo development by eliminating unnecessary stress

- Keep metabolic rates efficient with reduced lactate concentrations
- Minimize embryo disturbances
  - No dish changes
  - Reduce pH fluctuations
  - Reduce exposure to varying culture conditions
- Save on laboratory supplies
  - Reduce media usage—no medium changes
  - Fewer dishes and medium preparation steps

Continuous Single Culture media work effectively in:

- All time-lapse surveillance systems
- Day 5 blastocyst transfer programs with subsequent vitrification of surplus embryos, yielding a high blastocyst utilization rate (BUR)
- Day 3 transfer and vitrifying programs
- Preimplantation Genetic Diagnosis and Screening (PGD/PGS) tests



# CSCM-NX is a Clinically-proven, Low-lactate Single-step Medium That Helps Improve Blastocyst Development

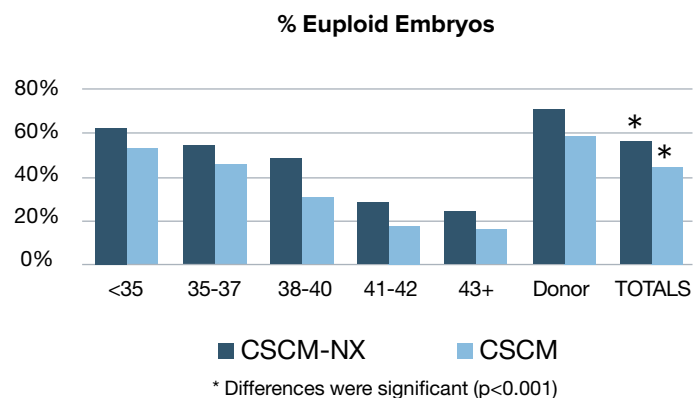
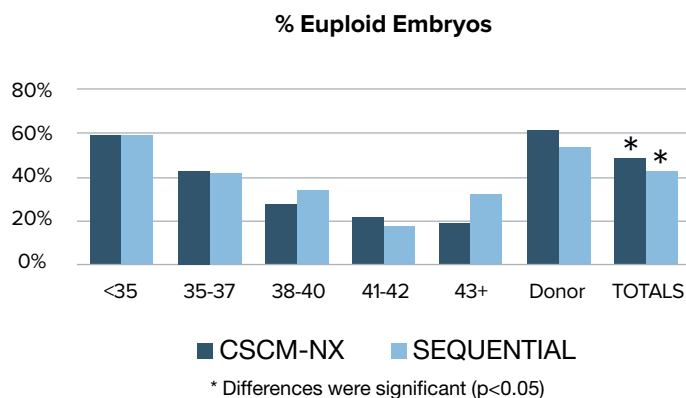
In a clinical evaluation of over 8,000 embryos, embryos cultured in CSCM-NXC demonstrated improved development over those cultured in CSCM-C.<sup>†</sup>

| Embryo Culture Media |        | Fertilization Rate | Total-Usable Blastocysts | Good/Fair Quality Blastocysts on Day 5 |
|----------------------|--------|--------------------|--------------------------|--|
| CSCM-C               | N=8021 | 70.7%              | 46.1%                    | 41.4%*                                 |
| CSCM-NXC             | N=148  | 73.6%              | 48.4%                    | 46.8%*                                 |

N=Number of embryos

\*Differences were significant (p<0.05)

In a retrospective analysis of more than 6,600 embryos, embryos cultured in CSCM-NX had higher euploidy rates.<sup>‡</sup>



<sup>†</sup> Salmon, K, et al. "Improved Embryo development After Use of FUJIFILM Irvine Scientific's Next Generation Continuous-Culture Media (NXC); ART Reproductive Center, Beverly Hills, CA USA, PCRS 2018

<sup>‡</sup> VerMilyea, M.D, et al. "Stress Relief: Can Continuous Culture in a Low-Lactate Culture Medium Reduce Numerical Chromosomal Abnormalities and Therefore Improve Euploidy Rates?"; Ovation Fertility-Austin, Texas. ASRM 2018

**10%**  
Increase in Mitotic Euploidy Embryos

With a lower lactate concentration, CSCM-NX improves mitotic euploidy rate by 10% when compared to a sequential culture system and Continuous Single Culture (CSCM).<sup>‡</sup>

# Handle Gametes and Embryos

In a stable environment

The perfect complement to Continuous Single Culture media. Multipurpose Handling Medium provides a versatile solution for all manipulations performed outside of the incubator such as oocyte retrieval and rinsing, sperm processing, ICSI and embryo transfer.

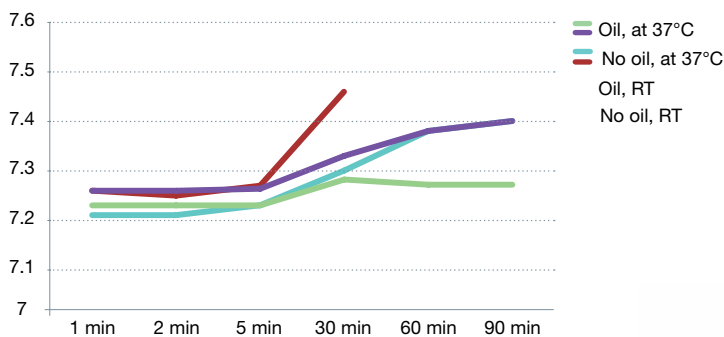
- Ensure an optimal, consistent environment outside the incubator
- Safely handle oocytes, sperm and embryos
  - Maintains physiological pH 7.2–7.4 and osmolality over a broad temperature range
  - Supports maintenance of cellular homeostasis with help of key amino acids, glycine and taurine
  - Reduces risk of toxicity using a dual buffer system (HEPES and MOPS)
- Use alternative protein supplements if preferred

Dvigubo buferio terpė, skirta kiaušialąsčių ir spermatozoidų surinkimui ir kitoms manipuliacijoms, nenaudojant CO<sub>2</sub>.

**Multipurpose Handling Medium–Complete**  
Ready-to-use

## pH Maintained Across Broad Temperature Range

### Multipurpose Handling Medium-Complete (MHM-C) 100 drops



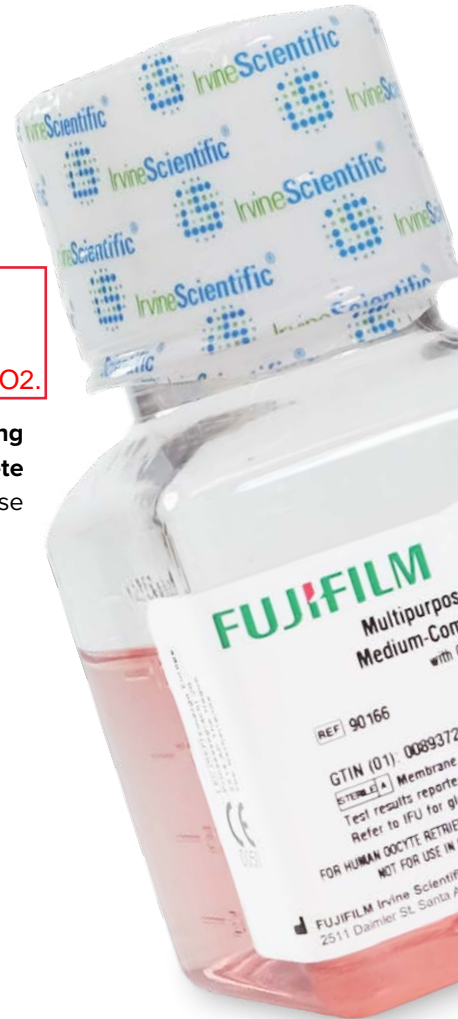
pH maintained between the ideal range of 7.2–7.4 at room temperature and in an incubator under oil.



Multipurpose Handling Medium provides the ideal environment for handling oocytes and embryos, whether it is retrieval, ICSI, or biopsying.

*Martyn Blayney, Head of Science, Bourn Hall Clinic, U.K.*

**Multipurpose Handling Medium**  
Add preferred supplements





# Enhance Performance

With high quality protein supplements and oil

Every lot tested for biocompatibility using MEGA

## Protein Supplements

Protein supplements facilitate *in vitro* manipulation by preventing gametes and embryos from sticking to glass and plastic. The presence of protein may also benefit embryo development by altering the solvent properties of the medium, making it more similar to the *in vivo* tubal environment.



Human Serum Albumin (HSA) consists of 10% human serum albumin from therapeutic grade source material in normal saline. CE Marked.



Serum Substitute Supplement (SSS) consists of 6% total protein (weight/volume) in normal saline. The protein component contains 84% HSA from therapeutic grade source material and 16% alpha and beta globulins.



Dextran Serum Substitute (DSS) consists of 5% total protein (weight/volume) in normal saline. The protein component contains 100% HSA from therapeutic grade source material. 2% dextran provides the non-protein alternative to globulin.



## Oil for Embryo Culture

Aliejus darbai su žmogaus embrionais

Oil for Embryo Culture minimizes evaporation, maintains osmolality and reduces pH drift ready-to-use, this high quality, sterile, non-interactive light mineral oil is stored in non-toxic plastic bottles and no washing is required.

## Using genetic engineering to deliver high quality products

Every lot of raw materials used for manufacturing protein and oil is quality control tested using MEGA, a genetic mouse embryo assay that is more sensitive to embryo-toxic materials than the traditional mouse embryo assay (MEA).<sup>1</sup>

<sup>1</sup> Gilbert et al. *Reprod Biol Endocrinol*. 2016 Mar;14:13. doi: 10.1186/s12958-016-0149-x

## Ordering Information

### Culture media

| Item                               | Catalog # | Size           | Additional Information  | Shelf Life                         | Storage |
|------------------------------------|-----------|----------------|---|------------------------------------|---------|
| Continuous Single Culture-NXC      | 90168     | 2 x 20 mL      | Ready-to-use, pre-supplemented with Human Serum Albumin (5% v/v HSA), for a final total protein concentration of 5 mg/mL. Phenol red free. CE marked. | 4 weeks after opening<br>120 days* | 2–8°C   |
| Continuous Single Culture-NX       | 90167     | 20 mL<br>60 mL | Requires protein supplement.<br>Phenol red free. CE marked  | 4 weeks after opening<br>120 days* | 2–8°C   |
| Continuous Single Culture Complete | 90165     | 2 x 20 mL      | Ready-to-use, pre-supplemented with Human Serum Albumin (5% v/v HSA), for a final total protein concentration of 5 mg/mL. CE marked.                  | 8 weeks after opening<br>120 days* | 2–8°C   |
| Continuous Single Culture          | 90164     | 60 mL          | Requires protein supplement. CE marked.   | 8 weeks after opening<br>90 days*  | 2–8°C   |

### Gamete and embryo handling

| Item  | Catalog # | Size                           | Additional Information   | Shelf Life | Storage |
|---|-----------|--------------------------------|--|------------|---------|
| Multipurpose Handling Medium-Complete (MHM-C) | 90166     | 100 mL<br>500 mL<br>12 x 12 mL | Ready-to-use. Contains key amino acids, 0.5% HSA, gentamicin 10 mg/L. CE marked. | 12 months* | 2–8°C   |
| Multipurpose Handling Medium (MHM)            | 90163     | 100 mL<br>500 mL               | Contains gentamicin 10 mg/L.<br>Add preferred supplements. CE marked.            | 12 months* | 2–8°C   |

### Protein supplements

| Item                                    | Catalog # | Size                                  | Additional Information  | Shelf Life | Storage |
|---|-----------|---------------------------------------|---|------------|---------|
| Human Serum Albumin (HSA)               | 9988      | 12x5 mL<br>100 mL                     | Saline solution containing total protein 10% w/v, 100% HSA. CE marked.  | 3 years*   | 2–8°C   |
| Serum Substitute Supplement (SSS)       | 99193     | 12x12 mL<br>100 mL<br>500 mL<br>60 mL | Saline solution containing 6% total protein w/v: 84% HSA and 16% alpha and beta globulins in saline.  | 2 years*   | 2–8°C   |
| Dextran Serum Substitute (DSS) Complete | 9301      | 12x12 mL<br>100 mL                    | Saline solution containing total protein 5% w/v: 100% HSA (50 mg/mL, 5% w/v), dextran (20 mg/mL, 2% w/v) as non-protein alternative to globulins. | 2 years*   | 2–8°C   |

### Oil for embryo culture

| Item                   | Catalog # | Size             | Additional Information                               | Shelf Life                        | Storage |
|------------------------|-----------|------------------|--|-----------------------------------|---------|
| Oil for Embryo Culture | 9305      | 100 mL<br>500 mL | Ready-to-use, sterile, light mineral oil. CE marked. | 8 weeks after opening<br>2 years* | 15–30°C |

\*From date of manufacture

