

ASSISTED REPRODUCTIVE TECHNOLOGIES



IrvineScientific®

**Simpler Processes.
Less Stress.
Better Results.**



Embryo Culture Media



Protein Supplements and Oil



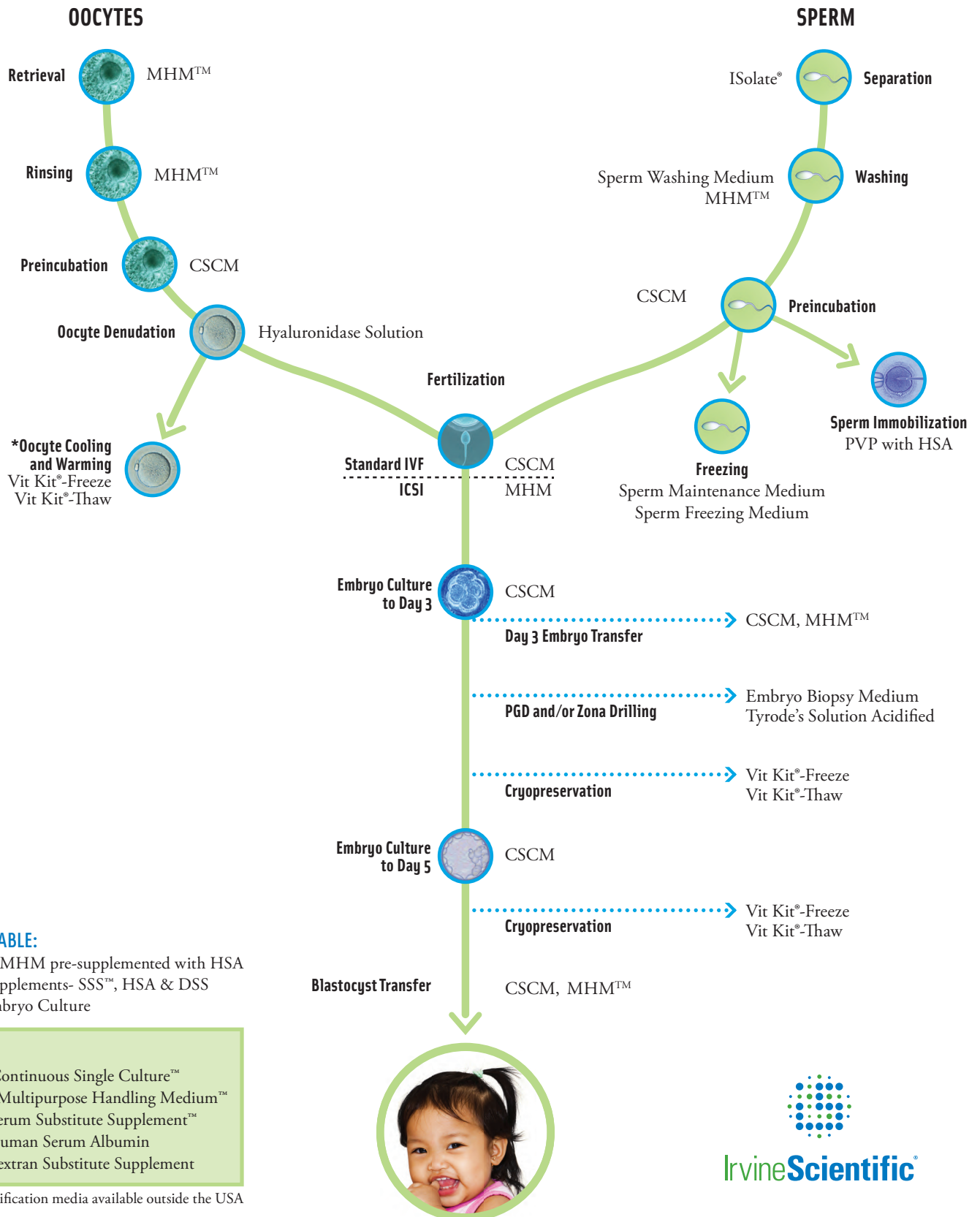
Vitrification



Visit us at www.irvinesci.com for more information • To order call 1-800-437-5706

Irvine Scientific's Uninterrupted Culture Medium System

Simpler Processes. Less Stress. Better Results.



ALSO AVAILABLE:

- CSCM & MHM pre-supplemented with HSA
- Protein Supplements- SSS™, HSA & DSS
- Oil for Embryo Culture



Gamete, Fertilization, and Embryo Culture Media

Continuous Single Culture™ Media

Continuous Single Culture™ Media (CSCM) is a novel solution designed for fertilization and embryo culture through day 5/6 of embryo development. This media is optimized for use in an uninterrupted culture system without dish change or medium renewal, and contains gentamicin as the antibiotic.

Value recognized when using CSCM for uninterrupted culture:

- One medium for all stages of development, provides a consistent environment reducing stress on embryos
- Reduces excessive manipulations and potential contamination risks when performing unnecessary dish changes or morphology checks
- Reduces the time and cost associated with dish preparation

Item	Part #	Size	Additional Information	Shelf Life ¹	Storage
Continuous Single Culture™	90164	60mL	Requires protein supplementation.	8 weeks after opening 90 days ¹	2-8°C
Continuous Single Culture™ Complete	90165	2x20mL	Ready-to-use, pre-supplemented with Human Serum Albumin (5% v/v HSA), for a final total protein concentration of 5mg/mL.	8 weeks after opening 120 days ¹	2-8°C

¹ From date of manufacture.

Components

Salts & Ions	Buffer	Energy Substrates	Antioxidants	Dipeptide	pH Indicator	Antibiotic
Calcium Chloride Magnesium Sulfate Potassium Chloride Potassium Phosphate Sodium Chloride	Sodium Bicarbonate	Glucose Sodium L-lactate Sodium Pyruvate	EDTA Sodium Citrate	Alanyl-Glutamine	Phenol red	Gentamicin
Amino Acids						
	Alanine Arginine Asparagine Aspartic Acid	Cystine Glutamic Glycine Histidine	Isoleucine Leucine Lysine Methionine	Phenylalanine Proline Serine Threonine	Tryptophan Tyrosine Valine	

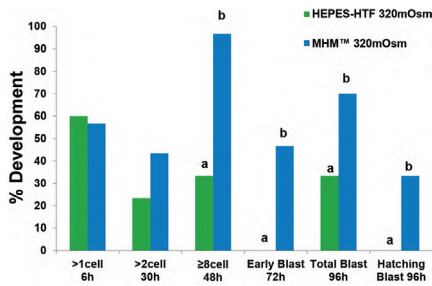
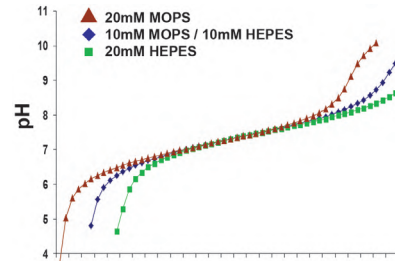


Gamete, Fertilization, and Embryo Culture Media

Multipurpose Handling Medium™

Multipurpose Handling Medium™ (MHM™) is the first dual-buffered solution that provides a safe and secure environment to maintain viability of gametes and embryos during manipulations under ambient conditions. This buffered medium is for oocyte handling, embryo transfer, micromanipulation and gamete washing and does not require the use of a CO₂ incubator.

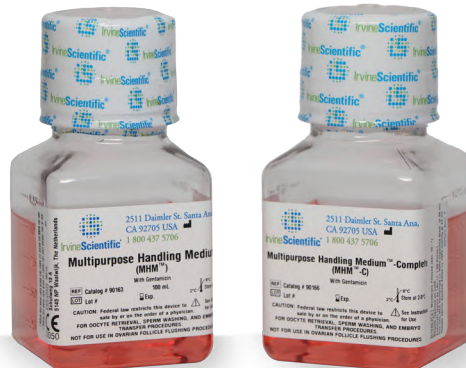
Use of a combination buffering system containing HEPES and MOPS, such as MHM™ allows adjustment of pKa, or optimal buffering capacity, not available in mono-buffered media. This permits formulation of a custom medium with a lower individual buffer concentration, with pH buffering optimized for use with gametes and embryos. This phenomenon is demonstrated by comparing pH titration curves.



Inclusion of evidence-based amino acids, glycine and taurine, found in MHM™ helps maintain cellular homeostasis, in part, by acting as potent osmolytes. These potent osmolytes in MHM™ provide added protection and permit embryo development in media with high osmolality that may be obtained via common laboratory practices during cell manipulation (Swain et al. 2010, Fertil Steril 94 Suppl 4: s32). Different superscripts within a developmental time point indicated a significant difference in development.

Item	Part #	Size	Additional Information	Shelf Life ¹	Storage
Multipurpose Handling Medium™ (MHM™)	90163	100mL, 500mL	Formulated with a buffering system composed of a HEPES, MOPS and Sodium Bicarbonate combination, which provides pH maintenance over the physiologic range (7.2 to 7.4). Contains the key amino acids glycine and taurine to help maintain cellular homeostasis.	5 weeks after opening 180 days ¹	2-8°C
Multipurpose Handling Medium™- Complete (MHM™-C)	90166	100mL, 500mL	Pre-supplemented with Human Serum Albumin (5% v/v HSA), for a final total protein concentration of 5mg/mL. Formulated with a buffering system composed of a HEPES, MOPS and Sodium Bicarbonate combination, which provides pH maintenance over the physiologic range (7.2 to 7.4). Contains the key amino acids glycine and taurine to help maintain cellular homeostasis.	5 weeks after opening 180 days ¹	2-8°C

¹From date of manufacture.



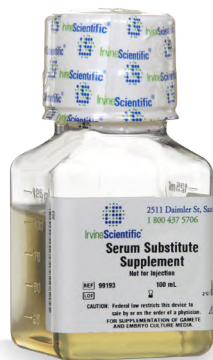
Protein Supplements and Oil

Protein Supplements

Human Serum Albumin, Serum Substitute Supplement and Dextran Serum Substitute have been designed for use in assisted reproductive procedures as protein supplements for culture media and gamete and embryo manipulation.

Item	Part #	Size	Additional Information	Shelf Life ¹	Storage
Human Serum Albumin (HSA)	9988	100mL, 12x5mL	Human Serum Albumin solution consists of HSA (100 mg/ml) from a therapeutic grade source material in a saline solution. This represents 10% total protein (weight/volume), in normal saline.	3 years	2-8°C
Serum Substitute Supplement™ (SSS™)	99193	100mL, 12x12mL	Serum Substitute Supplement™ (SSS™) contains 6% (w/v) total protein, in normal saline. This consists of 84% HSA (50mg/mL, 5% w/v) from a therapeutic grade source material and 16% alpha and beta Globulins (10 mg/mL, 1% w/v) in a saline solution.	2 years	2-8°C
Dextran Serum Substitute (DSS)	9301	100mL, 12x12mL	Dextran Serum Supplement consists of 100% HSA (50 mg/mL, 5% w/v) from a therapeutic grade source material and dextran (20 mg/mL, 2% w/v) added as a non-protein alternative to globulins, in a saline solution. This represents 5% total protein (weight/volume), in normal saline.	2 years	2-8°C

¹ From date of manufacture.



Oil

Oil for Embryo Culture provides a barrier overlay to ensure minimal evaporation of media, maintain osmolarity and minimize pH drift.

Item	Part #	Size	Additional Information	Shelf Life	Storage
Oil for Embryo Culture	9305	100mL, 500mL	Ready-to-use, sterile, light mineral oil.	8 weeks after opening 2 years ¹	15-30°C

¹ From date of manufacture.



Vitrification

Vit Kit[®] - Freeze and Vit Kit[®] - Thaw

Vit Kit[®] - Freeze and Vit Kit[®] - Thaw consist of solutions optimized for vitrification and recovery of oocytes (MII stage) and embryos (zygote to blastocyst stage). The composition of these solutions is based upon published methods utilizing a combination of ethylene glycol (EG) and dimethylsulfoxide (DMSO) as the permeating cryoprotectants and sucrose as the non-permeating cryoprotectant. The basal medium for these solutions consists of Modified M199 (containing 21mM HEPES buffer) supplemented with 20% DSS (HSA and Dextran, containing 10mg/mL protein) and 35µg/mL gentamicin as the antibiotic. Each kit contains liquid, ready-to-use solutions that do not require CO₂ incubation.

Solution	DMSO (v/v)	EG (v/v)	Sucrose
Equilibration Solution (ES)	7.5%	7.5%	0
Vitrification Solution (VS)	15%	15%	0.5M
Thawing Solution (TS)	0%	0%	1.0M
Dilution Solution (DS)	0%	0%	0.5M
Washing Solution (WS)	0%	0%	0

Item	Part #	Size	Additional Information	Shelf Life	Storage
Vit Kit [®] - Freeze (USA)	90133-DSO	1 kit	ES, 2x1mL VS, 2x1mL	8 weeks after opening 1 year ¹	2-8°C
Vit Kit [®] - Freeze (outside USA)	90133-SO	1 kit	ES, 2x1mL VS, 2x1mL	8 weeks after opening 1 year ¹	2-8°C
Vit Kit [®] - Thaw (USA)	90137-DSO	1 kit	TS, 4x1mL DS, 1x1mL WS, 1x2mL	8 weeks after opening 1 year ¹	2-8°C
Vit Kit [®] - Thaw (outside USA)	90137-SO	1 kit	TS, 4x1mL DS, 1x1mL WS, 1x2mL	8 weeks after opening 1 year ¹	2-8°C

¹ From date of manufacture.



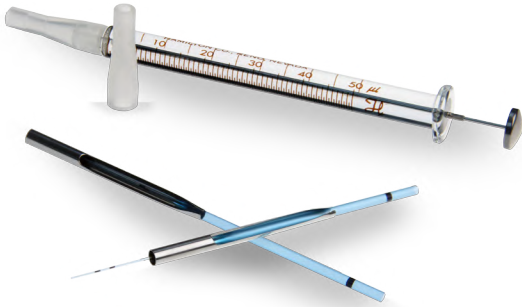
Vitrification

CryoTip®

CryoTip® is a finely-pulled plastic straw for long-term storage of oocytes and embryos of all stages in liquid nitrogen after vitrification.

Item	Part #	Size	Additional Information	Shelf Life ¹	Storage
CryoTip®	40709	1 pack (5 straws)	FDA approved and CE marked for use with oocytes and embryos.	2 years	Room temperature

¹From date of manufacture.

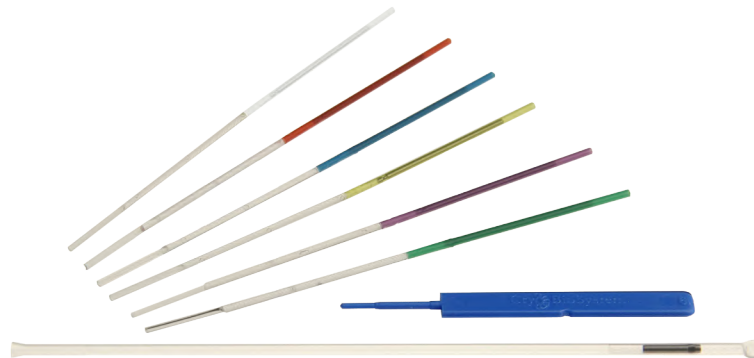


High Security Vitrification (HSV) Straws

HSV straws are the only high security closed system for oocyte and embryo vitrification, providing the highest quality of cryopreservation of biological samples.

Item	Part #	Size	Additional Information	Shelf Life ¹	Storage
HSV Straw - Red	25246	1 pack (4 straws)	FDA approved for 4-8 cell and blastocyst stage embryos. CE marked for use with oocytes and embryos.	3 years	Clean and dry environment away from light or heat
HSV Straw - White	25247				
HSV Straw - Yellow	25248				
HSV Straw - Mauve/Pink	25249				
HSV Straw - Blue	25250				
HSV Straw - Green	25251				

¹From date of manufacture.





IrvineScientific®

About Irvine Scientific

Irvine Scientific was established in 1970 to produce serum products for the cell culture market. From those beginnings, Irvine Scientific emerged and grew to become a respected innovator of cell culture products. Over the years, Irvine Scientific has evolved its products, services, and operations to become multi-disciplined, international in scope, and Subject Matter Experts (SMEs) in the area of cell culture media.



In 1987, Japan Energy (JE) - a member of Nippon Mining Holdings - acquired Irvine Scientific. With the steady backing of JE (now a member of JX Holdings), Irvine Scientific became a leader in the expanding IVF, biopharmaceutical, and regenerative medicine fields. JE has provided the strength to acquire products, such as Hana Biologicals, to expand operations in California and Europe, and most recently, to build additional manufacturing capabilities in Japan. The second manufacturing site provides complete redundancy of commercial phase products, which reduces risks of product supply interruption and expertly positions Irvine Scientific to serve the emerging markets in Asia.

Today, Irvine Scientific's diversified products and services benefit both life science customers and medical customers. Irvine Scientific is proud of its past as an innovator of products that positively touch so many lives. Whether it is developing the highest quality embryo culture media to assist IVF procedures, supplying high quality media for diagnostics and research, or customizing media for cell therapy or bio-pharmaceutical production, Irvine Scientific's primary goal is to provide the highest customer satisfaction. Irvine Scientific plans to build on this proud history and continue innovating to meet our customers' needs.

North America Headquarters

Irvine Scientific
2511 Daimler Street,
Santa Ana, CA 92705, USA
Phone: 1 (949) 261-7800
Toll Free: 1 (800) 437-5706
Fax: 1 (949) 261-6522

Europe Headquarters

Irvine Scientific
Unit 31, Newton Business Center, Block D
Newtownmountkennedy
County Wicklow
Ireland
Phone: +353 1 281 99 20
Fax: +353 1 281 99 28

Asia Headquarters

JX Nippon Oil & Energy Corporation,
Life Science Dept.
3-17-35 Niizo-Minami
Toda-Shi
335-0026 Saitama
Japan
Phone: +381 48 433 2063
Fax: +81 48 433 2112