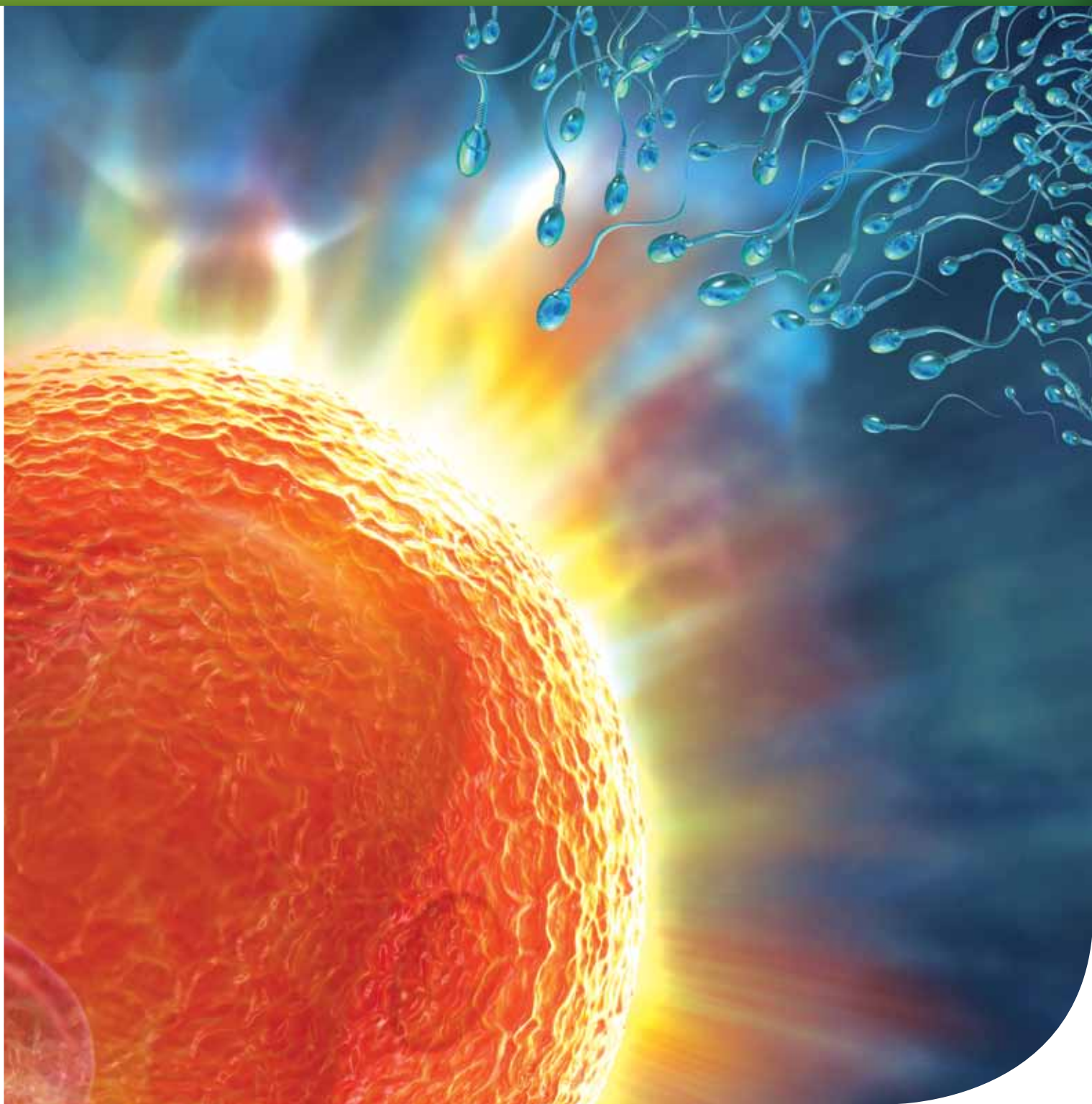


EMBRYO TRANSFER MEDIA



ViGRO™ | SYNGRO®

Designed specifically for the exacting needs of embryo transfer in both commercial and research applications, these unique media embrace modern cell culture technology, making the entire range complete and ready to use.

www.vetoquinol.com



In April of 2014, Bioniche Animal Health, the manufacturer of the ViGRO™ and SYNGRO® brands of media, became the newest division of Vetoquinol. Vetoquinol is a family-owned, independent company devoted exclusively to animal health. Our product portfolio is divided between livestock and companion animals with a wide range of products. Vetoquinol trades throughout Europe, the Americas, Africa, the Middle East and Asia Pacific. With the acquisition of Bioniche Animal Health, Vetoquinol is committed to servicing the Embryo Transfer industry with its long lasting tradition of excellence.



Our media are designed specifically for the exacting needs of embryo transfer in both commercial and research applications. These media are unique because they embrace modern cell culture technology, making the entire range complete and ready to use.

Production is carried out in clean rooms where all media batches must pass a series of quality control tests before being transferred to inventory for sale. Furthermore, the ultra filtering process used during manufacturing ensures that no additional filtering is required before use.

Recommended storage of this media is between 2–8°C (except where noted).

All of these features have made Vetoquinol media a benchmark for embryo transfer solutions throughout the world.

Reagent Quality

The process begins with purified, certified chemicals. Particular attention is paid to heavy metal contamination and endotoxin levels. Protein ingredients originate from animals that were inspected both pre-and post-mortem and are free of List A diseases and transmissible spongiform encephalopathies (TSEs), including bovine spongiform encephalopathy (BSE), in accordance with OIE guidelines.

Water Quality

Water purification starts with a pre-conditioning system involving sodium ion exchange for divalent and multivalent ions, followed by 5 µm filtration and activated carbon absorption to remove chlorine, particulate matter, and other organic compounds. The pre-conditioned water then travels to a reverse osmosis (RO) unit, where 98% of remaining ions, microbial impurities, and most of the remaining organics are removed. Storage of ultra-pure water in glassware and non-polyethylene containers may result

in increased levels of heavy metals and/or total organic carbons within only a few days' time. Therefore, our RO water is stored in rigid polyethylene reservoirs that will not leach impurities. After passing through a second activated carbon absorption filter to ensure removal of organics and chlorine, the water passes through a macroreticular resin to remove colloids, then passes through a two-bed cation and anion resin which removes the majority of ionic components. Finally, it passes through an ultrapure mixed-bed cartridge, which removes all remaining ions, yielding up to 18.3 mega-ohm water, which is essentially free of ionic contaminants. Any remaining organics are removed by using a high-efficiency synthetic carbon filter. A final 0.2 µm cross-flow filter is incorporated in the dispenser for even greater assurance of freedom from contamination.

Laboratory Procedure

The media production facility is a positive pressure, HEPA-filtered clean room equipped with Class 100 isolation areas. In these Class 100 isolation areas, media are serially filtered and packaged. Certificates of analysis are available for each batch of Vetoquinol media.

Packaging

Ethylene vinyl acetate (EVA), utilized in our media packaging, is superior to traditional plastic film because it is manufactured specifically for packaging pharmaceutical products. EVA has an ultra-low level of extractables and contains no plasticizers. The full transparency of EVA is a major advantage for visual inspection of both the solution and the empty bag. The 8 mL tubes are made from low-density polyethylene (LDPE) and have been extensively tested with bovine embryos at Colorado State University. These tubes are non-toxic, and media stored in them maintain their integrity throughout the recommended shelf life.





ViGRO™ Complete Flush Solution

- ▶ The surfactant properties of proteins are provided by poly vinyl alcohol (PV-OH). Because proteins also act as heavy metal chelators, other components have been added to fulfill this function.
- ▶ Packaged in 1, 2 and 4 Litre EVA infusion-style bags with a total of three ports: One port for filling and two extraction ports (a needle septum port and a spike port).
- ▶ Shelf life is 2 years from date of manufacture.
- ▶ **Recommended storage:** 15–30°C; this product will not be harmed by refrigeration.

438930 ViGRO™ Complete Flush Solution 1 Litre

438931 ViGRO™ Complete Flush Solution 2 Litre

439106 ViGRO™ Complete Flush Solution 4 Litre



ViGRO™ Holding Plus

Holding Plus is the first bovine embryo transfer holding medium based on a formula adapted from a proven embryo culture medium. *Holding Plus* is designed to support optimal embryo survival in air at room temperature and provides essential amino acids, growth factors, enzymes, energy substrates and antibiotics.

- ▶ *Holding Plus* is not an appropriate medium for long-term culture of bovine embryos in a CO₂ incubator.
- ▶ Packaged in EVA pouches with a needle septum port and in 8 mL disposable tubes.
- ▶ Shelf life is 18 months from date of manufacture, provided sterile technique is used.
- ▶ **Recommended storage:** 2–8°C.

438933 ViGRO™ Holding Plus 50 mL

438932 ViGRO™ Holding Plus 20 mL

438963 ViGRO™ Holding Plus 8 mL (6 tubes per box)



ViGRO™ Freeze Plus, 10% Glycerol

Freeze Plus is a complete glycerol freezing solution. This medium contains 10% cell culture grade glycerol, 0.4% BSA and 0.1M sucrose. The addition of a low concentration of sucrose decreases blastomere membrane damage from osmotic stress during cryoprotectant equilibration.

- ▶ Packaged in EVA pouches with a needle septum port and 8 mL disposable tubes.
- ▶ Shelf life is 18 months from date of manufacture, provided sterile technique is used.
- ▶ **Recommended storage:** 2–8°C.

438935 ViGRO™ Freeze Plus, 10% Glycerol 50 mL

438934 ViGRO™ Freeze Plus, 10% Glycerol 20 mL

438976 ViGRO™ Freeze Plus, 10% Glycerol 8 mL
(6 tubes per box)



ViGRO™ Ethylene Glycol Freeze Plus (with or without sucrose)

The success and convenience of freezing embryos in ethylene glycol for direct transfer brought about a dramatic change in the ET industry. Because ethylene glycol moves across cell membranes more readily than glycerol, embryos can be transferred directly into recipients after thawing, without removing the embryo from the straw, thus eliminating time-consuming rehydration steps.

Ethylene Glycol Freeze Plus medium with and without 0.1M sucrose both contain 1.5M ethylene glycol and 0.4% BSA.

- ▶ Packaged in EVA pouches with a needle septum port and in 8 mL disposable tubes.
- ▶ Shelf life is 18 months from date of manufacture, provided sterile technique is used.
- ▶ **Recommended storage:** 2–8°C.

438937 ViGRO™ Ethylene Glycol Freeze Plus with Sucrose 50 mL

438936 ViGRO™ Ethylene Glycol Freeze Plus with Sucrose 20 mL

438980 ViGRO™ Ethylene Glycol Freeze Plus with Sucrose 8 mL (6 tubes per box)

438939 ViGRO™ Ethylene Glycol Freeze Plus without Sucrose 50 mL

438938 ViGRO™ Ethylene Glycol Freeze Plus without Sucrose 20 mL

438981 ViGRO™ Ethylene Glycol Freeze Plus without Sucrose 8 mL (6 tubes per box)



There are no data available indicating that either formula (with or without sucrose) is superior to the other.



ViGRO™ One-Step Thaw Plus

- ▶ The use of a 1M sucrose solution for rapid one-step rehydration of embryos is convenient for thawing embryos cryopreserved in glycerol.
- ▶ Packaged in EVA pouches with a needle septum port and in 8 mL disposable tubes.
- ▶ Shelf life is 18 months from date of manufacture, provided sterile technique is used.
- ▶ **Recommended storage:** 2–8°C.

438941 ViGRO™ One-Step Thaw Plus 50 mL

438940 ViGRO™ One-Step Thaw Plus 20 mL

438982 ViGRO™ One Step Thaw Plus 6 x 8 mL



ViGRO™ Thaw Plus Kit 1,2,3

This kit contains three solutions (*Thaw 1 Plus*, *Thaw 2 Plus*, and *Thaw 3 Plus*), for three-step embryo rehydration. Each solution is a complete mixture containing 0.4% BSA, decreasing concentrations of glycerol (5%, 2.5%, 0.0%) and increasing concentrations of sucrose (0.5M, 0.5M, 0.6M). This combination of glycerol, sucrose, and BSA has proven to work very well across various protocols.

- ▶ Packaged in EVA pouches with a needle septum port and in 8 mL disposable tubes.
- ▶ Shelf life is 18 months from date of manufacture, provided sterile technique is used.
- ▶ **Recommended storage:** 2–8°C.

438943 ViGRO™ Thaw Plus Kit 1,2,3 50 mL

438942 ViGRO™ Thaw Plus Kit 1,2,3 20 mL

438984 ViGRO™ Thaw Plus Kit 1,2,3 8 mL (2 kits per box)





ViGRO™ Trypsin Wash (.25%)

Trypsin Wash is formulated to maintain maximum cell viability while meeting IETS/OIE specifications (IETS Manual, fourth edition). It is a 1:250 solution of Hank's Balanced Salts Solution (HBSS) serine proteases derived from porcine pancreas. *Trypsin Wash* is highly purified, virus- and mycoplasma-free, and 0.22µ filtered.

- ▶ Packaged in biofreeze vials.
- ▶ Shelf life is 9 months from date of manufacture.
- ▶ **Recommended storage:** ViGRO™ Trypsin Wash (0.25%) should be stored frozen at all times.
- ▶ Thaw immediately prior to use. Do not refreeze.

439001 ViGRO™ Trypsin Wash (.25%) 5 mL



ViGRO™ Splitting Plus

Embryo splitting is the most effective and rapid method of increasing the number of offspring in an ET program. This medium is designed for safe and rapid splitting or biopsy without the need for a holding pipette. It contains no protein and, consequently, allows proteins in the zona pellucida to form an electrostatic attraction to the bottom of the tissue culture dish. This holds the embryo in place during the splitting procedure. Used in conjunction with Vetoquinol's Twinner System.

- ▶ Packaged in EVA pouches with a needle septum port.
- ▶ Shelf life is 2 years from date of manufacture, provided sterile technique is used.
- ▶ **Recommended storage:** 15–30°C.

438944 ViGRO™ Splitting Plus 50 mL



ViGRO™ Rinsing Solution

Rinsing Solution is the same formula as *Complete Flush Solution*, except that it does not contain any surfactant. *Rinsing Solution* is designed for rinsing embryo collection filters at the end of the collection with a minimum of foaming.

- ▶ Packaged in a 1 Litre EVA infusion-style bags with a total of three ports: One port for filling and two extraction ports (a needle septum port and a spike port).
- ▶ Shelf life is 2 years from date of manufacture.
- ▶ **Recommended storage:** 15–30°C.

438945 ViGRO™ Rinsing Solution 1 Litre



SYNGRO® Holding

SYNGRO® Holding is the first product in a new, complete system of non-refrigerated, non-animal origin-based media designed for the embryo transfer specialist.

The product contains hyaluronan, a linear polysaccharide of alternating D-glucuronic acid and N-acetyl-D-glucosamine. Embryos have been shown to have surface receptors for hyaluronan, which is involved in the regulation of gene expression, cell proliferation and cell differentiation. Hyaluronan has been used very successfully as a replacement for serum or serum-based products in a number of embryo culture and freezing studies.

Practical Benefits

- ▶ Eliminates concerns regarding animal-based formulas.
- ▶ Eliminates costly air shipments of refrigerated media.
- ▶ Eliminates the 'down-time', waiting for media to warm to room temperature with each use.
- ▶ Eliminates wastage of 're-warmed' refrigerated Holding; store extra SYNGRO® medium at room temperature.
- ▶ Eliminates need to change current procedures—just substitute for any holding medium now used.

Recommended use:

Embryos should be recovered from the flushing solution and transferred to a covered petri dish containing SYNGRO® Holding. Embryos can be held at room temperature for up to 9 hours or up to 20 hours at 4°C. Embryos can be transferred using a straw containing SYNGRO® Holding.

Recommended storage:

2–30°C. Does not require refrigeration.

This product does not contain materials of animal origin.

438974 SYNGRO® Holding 50 mL

438975 SYNGRO® Holding 8 mL (6 tubes per box)





SYNGRO® Ethylene Glycol Freeze

SYNGRO® Ethylene Glycol Freeze with sucrose medium was developed in cooperation with Dr. George E. Seidel, Jr. at Colorado State University.

In ongoing field trials at several locations, SYNGRO® Ethylene Glycol with sucrose outperformed traditional Ethylene Glycol medium.

- ▶ Easy-to-use.
- ▶ Packaged in a 50 mL EVA pouch with a needle septum port and 8 mL disposable tubes.
- ▶ **Recommended storage:** 2–30°C. Does not require refrigeration.

439048 SYNGRO® Ethylene Glycol Freeze 50 mL

439049 SYNGRO® Ethylene Glycol Freeze 8 mL (6 tubes per box)



Equine Holding

This medium was developed at Colorado State University for collection of oocytes and other *in vitro* procedures.

The medium was modified to be ideal for holding equine embryos after collection.

- ▶ Packaged in EVA pouches with a needle septum port and in 8 mL disposable tubes.
- ▶ Shelf life is 18 months from date of manufacture, provided sterile technique is used.
- ▶ **Recommended storage:** 2–8°C.

438928 Equine Holding, 20 mL

438929 Equine Holding, 8 mL tubes (6 tubes per box)



Vetoquinol was born in Lure, France, at the beginning of the 1930's, from Joseph Frechin's vision. Since then, the company has always remained a family-owned business and experienced a sustained growth that brought it to its current position as a leader in the animal health market worldwide.



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