



AQUACULTURE MEDIA

FOR THE BEST FERTILITY RATE



AQUACULTURE MEDIA

StorFish / StorFish without Antibiotics



- Safe dilution for milt of freshwater species*.
- To mature and increase motility of macerated (gonad) milt.
- Preservation of milt for > 4 days at 4°C.
- Can be use as final rinsing solution for material in contact with milt avoiding premature sperm activation.
- Secure environment on waterbath for thawing.

Presentation: 1L for 10L final volume.

*Recommended for salmon, artic charr, trout, sturgeon, and other freshwater species.

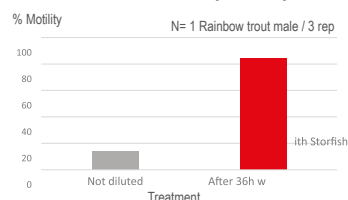
StorFish

Ref: 018500

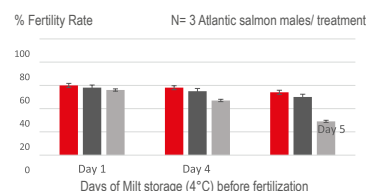
StorFish without Antibiotics

Ref: 029161

Maturation of rainbow trout (Neomale) with StorFish



Fertility Rate of Atlantic salmon eggs at 150 ATU fertilized with Milt stored with different products



ActiFish

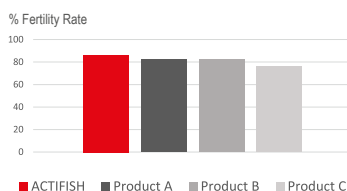
- Milt activating solution for fertilization in freshwater species*.
- This solution should replace all liquids present to secure environment.
- Specially recommended for cryopreserved sperm.

Presentation: 1L for 10L final volume.

*Recommended for salmon, artic charr, trout, sturgeon, and other freshwater species.

Ref: 018274

Fertility Rate of Atlantic salmon eggs at 150 ATU fertilized with Milt activated with different products



OvaFish

- Washing and cleaning solution for salmonid eggs*.
- Composition helps conditioning the oocyte before fertilization.

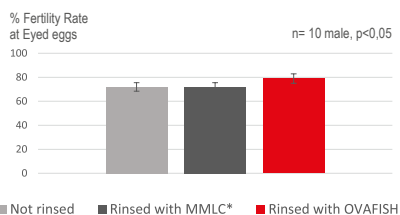
Presentation: 1L for 10L final volume.

*Recommended for salmon, artic charr, trout, sturgeon, and other freshwater species.



Ref: 026950

% of Atlantic Salmon Eyed eggs, using Cryopreserve milt on oocytes rinsed with different products



*MMLC= Media from Billard and Jalabert 1974

FreezeFish / FreezeFish M*

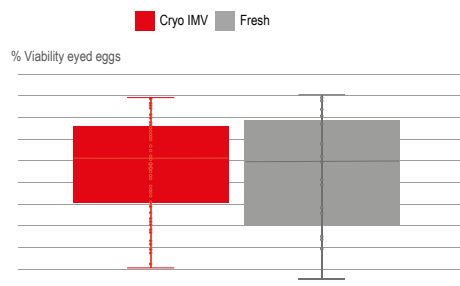
- Kit for the cryopreservation (freezing) of milt of freshwater species*.
- Contains all media needed for cryopreservation of milt.
- Protects spermatozoa from membrane damage associated to freezing.
- Fresh M contains Methanol and FreezeFish contains DMSO.

FreezeFish Ref: 026520

*Including salmon and trout.

FreezeFish M Ref: 026880

% Viability in Atlantic salmon eggs testing IMV Cryopreservation (Cryo) compared with Fresh milt instead of sperm (Fresh)



NEW

FreezeFish without M

- Base solution for cryopreservation, containing liposome and buffered solution.
- Designed for salmonids sperm cryopreservation.
- Specially manufactured to meet airfreight regulation related to Methanol*.

*Pure Methanol is required to complete formula.

Ref: 026587

MarineFreeze

- Media for the cryopreservation of marine species milt*.
- Can be used to preserve milt for up to 2 days at 4°C or to cryopreserve milt.

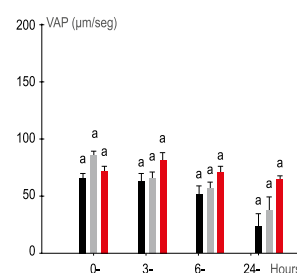
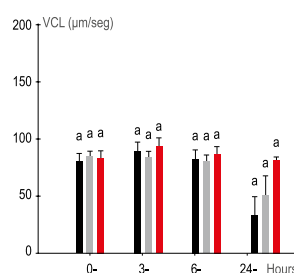
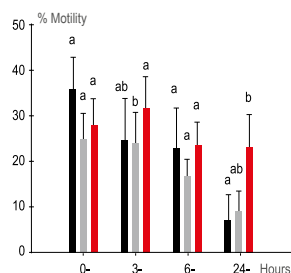
3 components for 115 ml of final solution.

*Validated for sea bass, sea bream, sole, mullet, among others.

Ref: 027775

For Fresh Milt Preservation

Control
Leibovitz (L-15)
Marine Freeze



MEDIA & APPLICATIONS

MEDIA	FRESH WATER SPECIES		SEA WATER SPECIES	
	FRESH MILT	CRYOPRESERVED MILT	FRESH MILT	CRYOPRESERVED MILT
StorFish	X	X		
OvaFish	X	X		
ActiFish	X	X		
FreezeFish range		X		
MarineFreeze			X	X

SCIENTIFIC PUBLICATIONS

STORFISH

Merino O., Figueroa E., Cheuquemán C., Valdebenito I., Isachenko V., Isachenko E. et al. (2017) Short-term storage of salmonids semen in a sodium alginate-based extender. *Andrologia* 49. <https://doi.org/10.1111/and.12661>.

Storfish is used as the reference extender for testing sperm storage adding extra alginate with good result.

Merino O., Dumorné K., Sandoval-Vargas L., Figueroa E., Valdebenito I., Fariás J., Risopatron J. Short-Term Storage of Coho salmon (*Oncorhynchus kisutch*) at 4°C: Effect of sperm extender dilution ratios and antioxidant butyl-hydroxytoluene (BHT) on sperm function. (2019) *Cryobiology* 2020, 06, 007

Storfish is used as extender testing the addition of supplementary BHT.

Bobé J., Labbé C., (2009) Chilled storage of sperm and eggs. In : Cabrita E., Robles V., Herraiz P. (eds) *Methods in Reproductive Aquaculture: Marine and Freshwater Species*, pp 219-235. CRC Press, Boca Raton, London, NY

Storfish allows both storage and artificial maturity of testicular sperm in females of reversed sex.

Trigo P., Merino O., Figueroa E., Valdebenito I., Sanchez R., Risopatrón J., (2015) Effects on Short-term semen storage in Salmon (*Oncorhynchus mykiss*) on sperm functional parameters evaluated by flow cytometry. *Andrologia* 47 : 407-411.

Contreras P., Dumorné K., Ulloa-Rodríguez P., Merino O., Figueroa E., Fariás J., Valdebenito I., Risopatron J. Effects on short-term storage on sperm function in Fish semen : A review. (2019) *Reviews in Aquaculture* 1-17.

This review summarizes the factors affecting sperm storage and refers Storfish as both extending and maturation solution.

Contreras P., Ulloa-Rodríguez P., Merino O., Valdebenito I., Figueroa E., Fariás J., Effects on short-term storage on sperm function in Patagonian blenny (*Elginops maclovinus*) (2017) *Aquaculture* 481 :58-63.

ACTIFISH

Nusbaumer D., Marques da Cunha L., Wedekind C. Sperm cryopreservation reduces offspring growth. (2019) *Proc. R. Soc. B*, 286, 20191644

Actifish, Storfish and Leja were used as basis for cryopreservation effect tests.

OVAFISH

Haffray P., Labbé C., IMV Technologies & Gérard Maisse Fish Sperm cryopreservation in France : From laboratory studies to application in selective breeding Programs (2008) *Cybio* 2008,32(2) suppl. :127-129

Actifish, Storfish and Ova fish used for cryopreservation tests.

MARINE FREEZE

Gonzalez-Lopez W., Ramos-Júdez S., Gimenez I., Duncan N. Sperm contamination by urine in Senegalese sole (*Solea senegalensis*) and the use of extender solutions for short-term chilled storage (2020) *Aquaculture* 516, 734649.

Marine Freeze shows better effects as marine fish sperm extender on short term storage.

IMV Technologies media developed in collaboration with the INSTITUT NATIONAL DE RECHERCHE POUR L'AGRICULTURE, L'ALIMENTATION ET L'ENVIRONNEMENT

INRAE



www.imv-technologies.com