



Spectrum - The SBS Cryosystem



By select breeders services and Minitube International

SBS and Minitube present the Spectrum equine semen freezing extenders, based on formulations developed by and used in SBS labs worldwide.

Spectrum equine semen freezing extenders combine to form the SBS CryoSystem

The SBS CryoSystem consists of a range of freezing extenders paired with complementary freezing protocols. The SBS CryoSystem allows the clinician to identify the best freezing extender for each individual stallion.

Spectrum extenders are used to freeze stallion semen in SBS labs worldwide. Horse breeders have trusted in the expertise of SBS for decades, and veterinarians recognize and appreciate SBS labs as a source of high quality frozen semen.

Spectrum extenders feature various cryoprotectants and specific egg yolk or milk content that combine to protect sperm cells from damage caused by freezing, and preserve the fertilizing ability of the semen after thawing.

With Spectrum extenders and the SBS CryoSystem, it is now possible to achieve pregnancy rates with frozen-thawed semen that are comparable to those with thawed semen.



Select Breeders Services (SBS) and Minitube International signed an agreement in May 2014, aimed to focus on research and product development for equine reproduction.

With 30 years of experience in equine reproduction, over 4000 stallions in their database, 55000 ejaculates frozen, and 440000 insemination doses prepared, SBS contributes with outstanding expertise to the development of the equine frozen semen industry.

Minitube has been serving clients worldwide with reproduction technology products for more than 45 years and is engaged in product development and in-house manufacturing. Minitube provides products of uncompromising quality and safety.



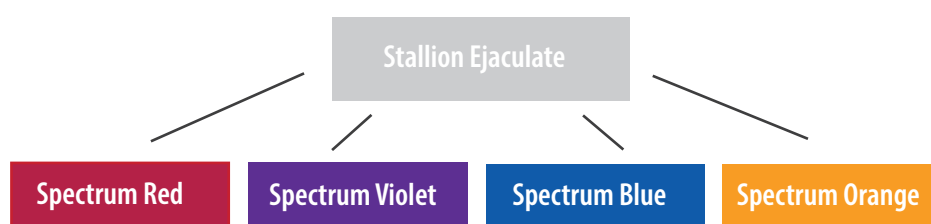
Why is it important to have a range of freezing extenders available?

Unlike production livestock, stallions are generally not selected on the basis of fertility tests. Within the breeding population, there is a high variability in the ability of sperm from individual stallions to survive cryopreservation. This is likely due to differences in the lipid composition of sperm membranes. Using a single extender or freezing protocol for all stallions may result in less than optimal results for many stallions.

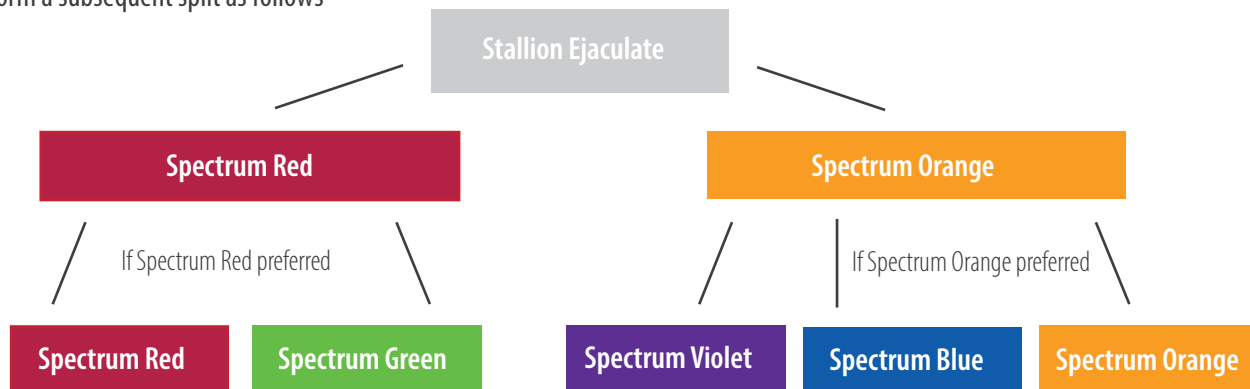
How do we identify the best extender for each stallion?

Minitube offers a Test Freeze Kit that contains the main Spectrum extenders in smaller quantities, plus centrifugation medium and CushionFluid for centrifugation. Using the split ejaculate trial described below, it is possible to determine the best Spectrum extender for each stallion. Two approaches are recommended depending on the amount of semen available.

1. Approach: If sufficient sperm are available (approx. 10 billion) - compare four of the extenders in a split ejaculate test freeze



2. Approach: If < 10 billion sperm are available, first split between Spectrum Red and Spectrum Orange, then based on this result, perform a subsequent split as follows



☰ Scope of delivery

- 2 x Spectrum Orange, 15 ml
- 2 x Spectrum Red, 15 ml
- 1 x Spectrum Blue, 15 ml
- 1 x Spectrum Violet, 15 ml
- 1 x Spectrum Green, 15 ml
- 2 x CushionFluid, 30 ml
- 2 x SBS Centrifugation Medium, 120ml

Spectrum test freeze kit

13572/0000



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All Spectrum extenders are produced in Minitube's GMP certified media production facility. Spectrum extenders are pH and osmolarity balanced and clarified. Chemicals are reagent grade and bioassays are performed on each batch.

All Spectrum extenders are presented as ready to use solutions. There is no need to source individual components or to add antibiotics. Spectrum extenders are presented in convenient package sizes. Transport and storage at -20°C.

Spectrum Orange	
30 ml	13572/0020
15 ml	13572/0200
Spectrum Red	
30 ml	13572/0030
15 ml	13572/0300
Spectrum Green	
30 ml	13572/0040
15 ml	13572/0400
Spectrum Blue	
30 ml	13572/0050
15 ml	13572/0500
Spectrum Violet	
30 ml	13572/0060
15 ml	13572/0600

Low in milk and egg yolk
Best combined with slow cooling and freezing

High egg yolk content, no milk
Best combined with rapid cooling and freezing

Milk-based, low in egg yolk
Best combined with rapid cooling and freezing
Beneficial for certain stallions only

Low in milk and egg yolk
Best combined with slow cooling and freezing
Cryoprotectant is highly membrane permeable

Low in milk, contains egg yolk
Best combined with slow cooling and freezing
Balanced combination of cryoprotectants



more
information



The unique SBS CryoSystem, consisting of Spectrum extenders and freezing protocols, has been tested on thousands of stallions, demonstrating that pregnancy rates can be achieved with frozen-thawed stallion semen which are comparable to those of cooled semen.

(+ Your benefits

- + More ejaculates can be successfully frozen
- + Higher overall quality of frozen semen
- + Produce more commercial doses per ejaculate
- + The Test Freeze Kit allows you to determine the best semen freezing extender and protocol for each stallion
- + The Test Freeze Kit contains all the media needed to freeze split ejaculates and a comprehensive manual
- + While the use of a programmable freezer will yield more consistent results, vapor freezing or a programmable freezer can be used
- + Benefit from the experience of SBS



The SBS Cryosystem and Spectrum extenders....
when only the best will do!