



Spectrum Duo



New freezing extender option: simple logistics, excellent results

The unique **SBS CryoSystem**, consisting of Spectrum extenders and freezing protocols, has been tested on thousands of stallions and has shown that frozen thawed stallion semen can achieve pregnancy rates comparable to cooled semen.

Spectrum Duo is a new presentation of the well-known SBS Spectrum extenders, designed for easier logistics. Two versions are available which differ in cryoprotectant, milk and egg yolk content, thus taking into account the individual needs of different stallions and ejaculates.

Providing the same results as the ready-to-use options, the new Spectrum Duo extenders **consist of two components** that can be easily blended into the finished product by adding egg yolk :

- **Part A:** A bottle containing bi-distilled water and cryoprotectants (liquid)
- **Part B:** A bottle containing buffers, sugars, salts, and antibiotics (powder)

The two-component design allows **shipping temperatures of up to +20°C** making Spectrum Duo less sensitive to temperature changes and reducing shipping costs by eliminating the need for dry ice. Storage temperature should be below +8°C.

Spectrum Duo Red 13572/0230

Spectrum Duo Violet 13572/0260



Say goodbye to logistics issues
shipping at <+20°C, storage at <+8°C

(+ Your benefits

- + Unique SBS CryoSystem allows to determine the best extender and protocol for each individual stallion
- + More ejaculates are successfully frozen and the overall quality of frozen semen is higher
- + More commercial doses are produced per ejaculate
- + Spectrum extenders are balanced for pH and osmolality, chemicals are reagent grade, and each batch is biochemically tested
- + Spectrum extenders are manufactured in Minitube's GMP-certified media production facility
- + Low shipping costs and storage requirements (shipping at <+20°C, storage at <+8°C)
- + Easy and fast preparation of the final extender





■ Preparing Spectrum Duo

The preparation is simple: just mix the two components and add egg yolk. For a better microscopic image and a reliable CASA evaluation, we recommend centrifuging the extender and using only the supernatant for diluting the semen.

1. Warm the liquid component Part A to +38°C.
2. Add the powder component Part B to the liquid component Part A and mix by shaking the bottle vigorously. Add egg yolk (Red: 20.58 g, Violet: 10.29 g) and mix again.
3. For a better picture under the microscope: pour the content of the bottle into 2 x 50 ml Falcon tubes and centrifuge at 2000-2500 g for 20 minutes.
4. Carefully remove the supernatant and collect it in a suitable container. Make sure that the pellet in the Falcon tube remains intact. The collected supernatant is your final extender (volume approx. 100 ml).



brilliant microscopic image and reliable CASA evaluation after centrifugation

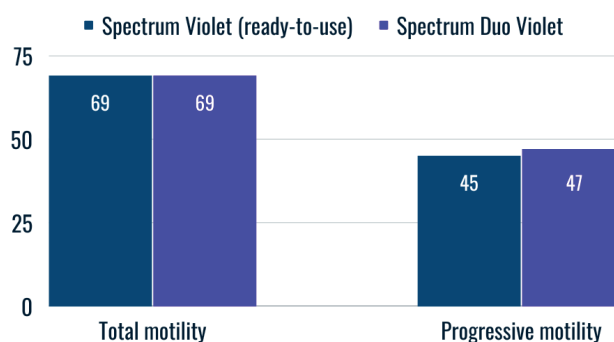
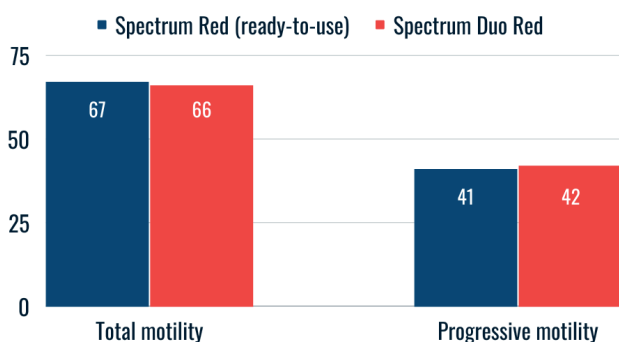
■ Evaluating Spectrum Duo

Based on a paired t-test statistical analysis, there was no difference in both total and progressive motility between the ready-to-use Spectrum extender and Spectrum Duo (Red and Violet)*.

The ready-to-use Spectrum extender was produced and stored at -20°C at Select Breeders Services. Liquid and dry components of Spectrum Duo were prepared and stored at +4°C according to the Minitube protocol.



no difference in post thaw quality between ready-to-use Spectrum and Spectrum Duo



n=3 ejaculates

* When properly prepared according to Minitube instructions.