

Longer storage times, fewer production days

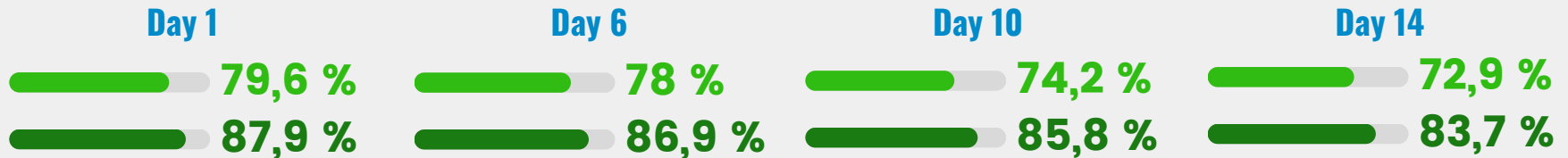
Androstar® Plus increases the **flexibility of semen production** while ensuring maximum protection for sperm doses. With its highly effective membrane protectors and advanced antioxidants, it guarantees optimal preservation for **at least 7 days and up to 14 days** after semen production. This capability allows reducing production days in the lab.

- ★ Fewer production days per week
- ★ Day production instead of night production
- ★ More employee-friendly working hours
- ★ Lower costs in boar studs



Progressive Sperm Motility & Membrane Integrity

after n days of storage



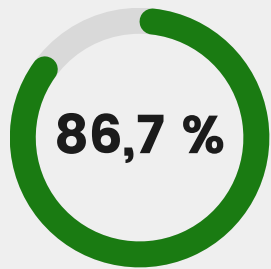
University of Veterinary Medicine Hannover, Foundation (TiHo) (2019): Laboratory trial with semen from 7 boars diluted and stored with Androstar® Plus (17°). After 24, 144, 240 and 336 hours, motility and membrane integrity were examined.

Longer storage times, more flexibility in AI

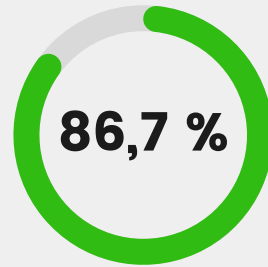
With its highly effective membrane protectors and advanced antioxidants, **Androstar Plus®** guarantees optimal preservation for **at least 7 days and up to 14 days** after semen production. Semen doses preserved with Androstar® Plus allow sow farms **more flexible logistics and use** while ensuring high semen quality and optimal insemination results even if the semen doses are several days old.



Farrowing rate



0-3 days
mean semen age



4-6 days
mean semen age

Total born piglets (n)



Optimal insemination results

after short and long-term storage

Retrospective field study on the influence of semen age on fertility with three commercial sow farms in the US using Androstar® Plus. 3000 sows per semen age group were randomly selected. Maximum mean semen age on these farms was 6 days.

Tested and proven customer favorite



“For almost 15 years we are now using the **Androstar® Plus** extender of Minitube in order to **optimally protect** our high-quality insemination doses from uncertain temperature conditions.”

Heikki Hassinen, Finnpig Oy, Finland

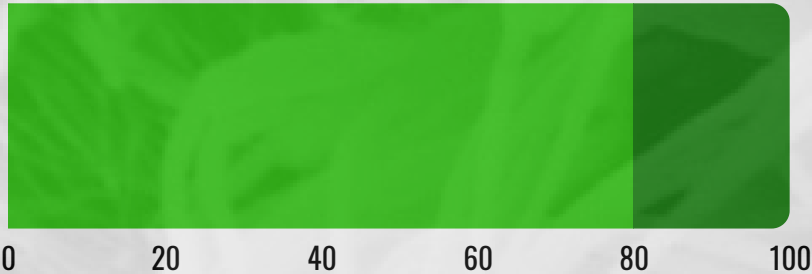


“By switching to **Androstar® Plus**, we gave our customers the option to inseminate even days after the semen tube delivery. They gratefully accepted the **logistic benefits** - and at the same time achieved **greater fertility** in their sow herd!”

Elisabeth Fischer, Eberstation Kammerlehen, Bayern-Genetik GmbH, Germany



■ Excellent ■ Good ■ Fair ■ Bad



Large-scale user survey

80% rated Androstar® Plus as "excellent"

20% rated Androstar® Plus as "good"

Superior boar semen protection

Cell Shield Protection (CSP®) is a proprietary component of **Androstar® Plus** which provides unparalleled protection for sperm when exposed to temperature fluctuations, physical stress and long-term storage.

High stress resistance of the semen leads to more homogeneous insemination results.

Robustness T³: Temperature, Transport, Time



Powerful temperature buffer

External influences on the sensitive sperm cells are effectively buffered over a wide temperature range from +10° to +25°C



High physical stress resistance

The functionality of the spermatic cell membranes is protected against the influences of suboptimal transport and storage conditions



Long-term preservation

Unique proprietary membrane and viability stabilizing components help sperm to maintain their viability over a longer duration



Certified quality, security, reliability

The consistently superior quality of **Androstar® Plus** is possible due to our **strict quality control**.

Each batch of components, and each batch of extender produced, is examined physiochemically for purity, absence of non-intended substances, and for semen preservation properties.

Production steps are certified according to the rigorous **GMP standards** (Good Manufacturing Practice).

- ✓ Only original materials of highest quality and purity enter the production chain
- ✓ Raw material batches undergo strict purity and spermatology tests
- ✓ Mixing and packaging under GMP conditions in dedicated clean room
- ✓ Quality control of each extender batch in certified independent third-party reference labs
- ✓ Made in Germany



Maximum product quality and safety



Responsible, effective bacteria control

Transparency in antibiotic content

The antibiotics used in **Androstar® Plus** are proven to be **sperm-friendly** and allow efficient control of a large spectrum of bacteria, especially those normally found in boar semen centers. The availability of various antibiotic mixtures ensures maximum safety, tailored to your individual requirements and complying with national and international regulations.

The antibiotic content of each **Androstar® Plus** variant is clearly indicated, ensuring **full transparency**.

Fewer antibiotics, same effectiveness



A newly developed **organic bactericidal supplement (OBS)** allows reducing the concentration of antibiotics by 50% with the same effective control of bacterial contamination.

Reducing the concentration of antibiotics improves sperm quality and reduces the risk of bacterial resistance to antibiotics.



100%
transparency