

Artificial insemination

Part 2: How to handle semen safely

by Joel Nkuna, AI technician: Taurus

Semen is fragile and must be handled properly for the best results. Semen is packed in mini straws of 0,25 ml and medium straws 0,50 ml. It is stored in liquid nitrogen at a temperature of -196°C. Kept at this temperature, semen will last for years. A temperature rise and subsequent refreezing will damage semen. If mini-straws are exposed to air for longer than two seconds, temperatures may rise high enough to damage semen.

Make sure liquid nitrogen always covers the straws and fills the goblets (semen containers) while semen is stored in the tank. Semen straws can remain fertile when they are stored in liquid nitrogen vapour, but two problems may occur if the liquid nitrogen level drops to a very low level:

- The straws can get temperature damage if they are lifted into the neck of the tank without liquid nitrogen present in the goblet
- Nearly empty goblets can float out of the canisters when the tank is refilled with liquid nitrogen.

Remember, semen is fragile and must be handled carefully. Exposure to direct sunlight, dust, water, soap powder or rough handling, might reduce conception rates. Positively identify the bull before removing straws from the liquid nitrogen tank.

When you work with liquid nitrogen, it is important to take special safety precautions. Liquid nitrogen is dangerous and must be handled with care. Avoid contact with the liquid and the cold nitrogen gas. It can burn your skin. It is important to:

- Secure the nitrogen tank at all times when it is being transported
- Never use another lid than the one supplied with the tanks. Wrong lids can interfere with the evaporation of gas and can cause the tank to burst
- Check the tank regularly for signs of frost on the outside and for excessive loss of liquid nitrogen
- The tank should be kept in a secure place so that children and people who do not know of its dangers, do not have access to it.

First aid for liquid nitrogen burns

Immediately flood the area with cold water and apply a cold compress. Do not rub the affected area. Call a doctor if there is any chance that the eyes have been affected or if the skin blisters. **UM**



Handle semen safely

- **Hanteer semen versigtig**
- **Sigcine siphephile isidoda**
- **Waphathe amadlozi ngokukhuselekileyo**
- **Boloka botona ka polokeho**

- Keep the semen straws covered with liquid nitrogen.
- Hou semenstrooitjies bedek met vloeibare stikstof.
- Gcina imicu yesidoda imbozwe ngenayithrojini.
- Yigcine imicinga yamadlozi igqunywe ngolwelo lwenitrojin.
- Boloka mehlaka ya botona e kwahetswe ka mokedikedi wa nitrogen.
- Avoid direct sunlight, dust, water, soap, powder and handle carefully.
- Hou weg van direkte sonlig, stof, water, seep en poeier en hanteer versigtig.
- Sivikele elangeni, ezintulini, emanzini, ensipheni, empushini futhi usiphathe ngokucophelela.
- Mayingadibani nokukhanya kwelanga, uthuli, amanzi, isephu, umgubo uze uyiphathe ngenyameko.
- Qoba mahlasedi a letsatsi, lerole, metsi, sesepa, poiri mme o bo tshware ka hloko.



- Identify the bull before removing straws.
- Identifiseer die bul voordat strooitjies verwyder word.
- Hlonza inkunzi ngaphambi kokuthatha imicu.
- Khetha inkunzi yenkomo phambi kokuba ususe imicinga.
- Supa poho pele o tlosa mahlaka.



- Always keep the tank upright during transport.
- Hou altyd die tenk regop wanneer dit vervoer word.
- Uboligcina libheke phezulu ithangi ngesikhathi sokulithutha.
- Ligcine itanki lime nkqo xa ulilayishile.
- Ka mehla boloka tanka e eme ka nako eo o e tsamaisang.

- Check for signs of frost and spills of liquid nitrogen on the outside.
- Kyk vir tekens van 'n yskors en vloeibare stikstof aan die buitekant van die tenk.
- Uboqaphela izimpawu zesithwathwa nokuchitheka kwenayithrojini enguketshezi ngaphandle.
- Khangela iimpawu zokukhenkceka nezokuphalala kolwelo lwenitrojin ngaphandle.
- Lekola matswao a serame le ho qhaleha ha mokedikedi wa nitrogen ka ntle.

- Put the tank's own lid on it.
- Sit die tenk se eie deksel op.



- Ubolivala ngesivalo salo ithangi.
 - Cika itanki ngesiciko salo.
 - Beha sekwahelo sa tanka hodimo.
- **If nitrogen gas accidentally burns you:** Pour cold water on the sore and apply a cold compress. Go to a doctor if it gets into your eyes or the skin blisters.
 - **Wanneer jy per ongeluk met stiksofgas gebrand word:** Gooi koue water op die wond en draai 'n nat verband daarom. Gaan dokter toe as dit in jou oë kom of blase op die vel vorm.
 - **Uma ushiswa ngengozi yigesi inayithrojini:** Thela amanzi abandayo esilondeni bese ucindezela ngento ebandayo. Yiya kudokotela uma ingena emehlweni noma uma isikhumba sakho siba namabhanyaza.
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 - **Ha o ka tjeswa ka kgase ya nitrogen ka kotsi:** Tshela metsi a batang sesong mme o hatelle ka ntho a batang. E ya ngakeng ha e ka kena mahlong a hao kapa wa ba le matswabadi letlalong. **UM**

