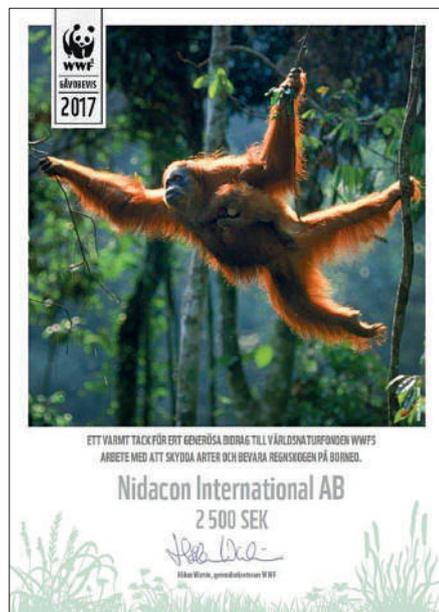


Nidacon News

The news letter from your ART supplier • No 2 • 2017

► Our World – Our Responsibility

At Nidacon we, like so many others believe that we are all responsible for the footprint we leave on this earth and should all do our best to make this imprint conscious, meaningful and as small as possible.



We want to contribute to a sustainable world by taking responsibility for our impact on society, the environment.

We believe that through strategic work with CSR (Corporate Social Responsibility), we can strengthen our ability to identify and prevent potential harmful effects, but above all, create valuable opportunities for our own business and society as a whole.

This strategy includes:

§ having two persons at the company who are well educated in sustainability. By attending seminars, courses, conferences and workshops on the subject we

continue to keep ourselves updated and inspired;

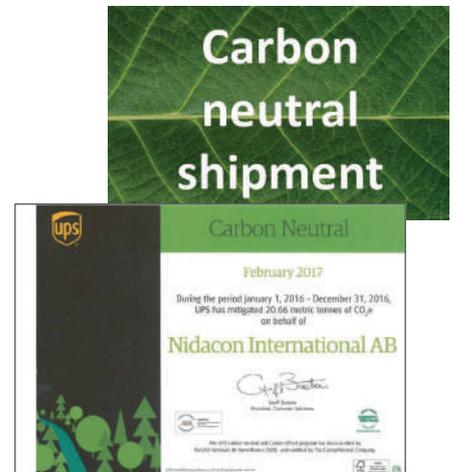
§ being members of a regional sustainability association called CSR Västsverige, which is Sweden's largest multidisciplinary CSR network.

§ taking responsibility for helping children that are born into less fortunate situations since we work in the field of fertility and help couples reach their dreams of having babies. Therefore we support the organization We Care, which strives to improve the lives of women and children in Nepal.

§ reducing the impact of transports from Nidacon and thereby addressing climate change. Our main logistics partner is UPS and since we transport products all over the world we compensate for the carbon emissions caused by these transports through being part of the UPS carbon neutral program. This means that we support emissions reduction projects that help mitigate the climate impact every tonne of carbon dioxide a parcel from Nidacon produces in transportation. Nidacon's carbon dioxide emissions are measured every month (1,2 – 1,9 tonnes/month). The emissions for a return trip

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from Gothenburg to Stockholm in a car like Volvo V70 are 0,12 tonnes) and reduced to net zero through the program.

§ compensating for all our other transports by using the measurements made by the carbon neutral program and recalculating them to include these other transports. The emission reduction project chosen for emissions caused by all other transports is WWF's project to protect and preserve the forests of Borneo.

§ using electricity only from renewable resources.

§ recycling all our garbage.

§ offering all our employees healthcare benefits.



Regulatory Affairs
Ms. Manisha Olausson
Direct +46 31 703 06 48
manisha@nidacon.com

 - All Nidacon shipments are climate compensated
- Please consider the environment before printing this email

► Make sure you are using the right oil

Using paraffin oil as a protective barrier for the human embryo culture system is essential for optimal in-vitro fertilization (IVF) outcomes.

The volume of medium used for culture can be very small, making it crucial to control water evaporation and fluctuations in the pH and temperature of the medium. Evaporation increases medium salt concentrations and, consequently, osmolality, which can both independently impair embryo development and may lead to cellular damage.

The oil should allow diffusion of gases to small volumes of culture medium. It is necessary for an oil overlay to protect against osmotic stress caused by evaporation in the incubator during laboratory procedures. Furthermore, an oil

overlay helps diminish the effects of sudden fluctuations in temperature, gas exchange and pH during micromanipulation outside the incubator, such as ICSI and assisted hatching.

Light does affect the peroxide level and, therefore, the brown bottles will protect the oil during storage.

Nidacon offers you NidOil™, a paraffin oil product designed with gametes and embryos in mind. The oil is neither sticky nor too viscous; to facilitate pipetting, but it is sufficiently viscous to prevent movement of the drops of media around the culture dish.

There have been several reports of paraffin oils becoming embryo-toxic after exposure to light on the laboratory bench (1). As a precaution against any light-induced changes, NidOil™ is supplied in amber, screw-top bottles.

We perform extensive testing of all batches produced before their release. Tests are performed on multiple bottles from each production in order to ensure that there is no change of quality during

the production. Similar quality tests are also performed before deciding on a new batch of raw material; a production is performed and then tested before we order a larger quantity of the batch.

We started to perform the peroxide level test after results from Japan were published where they found that higher levels of peroxide affected the embryo, peroxides arising from oxidation can be a serious contaminant (2, 3).

This test is carried out and is a requirement for all our shelf life testing, ensuring that Nidoil has the same quality even after two years. It is quite clear that light does affect the peroxide level and, therefore, the brown bottles are definitely something that will protect the oil during storage.

In our mouse embryo assay, we check both blastocyst formation and the resultant morphology of the blastocyst. In the quality certificate for the product, we state the results from day 5 but each batch is also checked on day 6 to ensure the high quality product we demand.

Our experience with oil has also shown that it's easier to maintain a high oil quality if you have a smaller bottle. Therefore, we recently changed our NidOil™ 300 ml bottle to a package of 4x100 ml NidOil™ bottles.

References

1. *Washed paraffin oil becomes toxic to mouse embryos upon exposure to sunlight*
Provo et al *Theriogenology* 49 1998
2. *Damage of embryo development caused by peroxidized mineral oil and its association with albumin in culture*
Otsuki et al *Fert & Ster* Vol 91 2009
3. *Peroxidation of mineral oil used in droplet culture is detrimental to fertilization and embryo development*
Otsuki et al *Fert & Ster* Vol 88 2007



Quality Control procedures

Physical analyses

Density (d 20°C / 20°C, g/mL)

Accepted values:

0.82-0.88

Sterility and toxin analyses

Microbiological growth control

No growth

Endotoxins, quantitative LAL assay (EU/mL)

< 0.100

Biological analyses

Mouse Embryo Assay (% development to blastocyst stage at day 5)

>80

Human sperm survival after 18 hrs

>85

Peroxide analyses

Peroxide level (mEq/kg)

<0.02



Product Manager
Ms. Ann-Sofie Forsberg
Direct +46 31 703 06 42
ann-sofie@nidacon.com

► Why are women freezing their oocytes? Answer is – because of lack of eligible men.

IVF doctors are no substitute for knights in shining armour. But many more women in their 30s and 40s want to explore their motherhood options.

New research on egg freezing has this week confirmed what single, well educated women have instinctively known for years: there is a lack of eligible men out there.

Professor Marcia Inhorn, an anthropologist at Yale University, and her colleagues interviewed 150 Women in their late 30s and early 40s who opted for egg freezing in the US and Israel. Their results show that women were not intentionally postponing childbearing for educational or career reasons, as is often assumed in media coverage of this phenomenon, but rather preserving their remaining fertility because they did not have partners to create a



family with. The researchers concluded that women see egg freezing as “a technological concession to the man deficit” using it to “buy time” while continuing their search for a suitable partner to father their children.

Similar studies have now been performed in the UK by Zeynep Gurtin; a senior research associate at the London Women’s Clinic and a visiting researcher at the Centre for Family Research, University of Cambridge. He has confirmed the results and encountered three different groups of women.

The first determined to be mothers and having given up on Mr Right, a kind of more practical oriented women.

The obvious question has to be: where have all the good men gone?

The second group, women in their early 30s seeking fertility assessment and considering egg freezing, are proactively planning for the great unknown future.

The third and by far the fastest growing group are in their late 30s and early 40s; just as Inhorn describes, they wish to hold out for that elusive partner to have a family with, while recognising that, biologically speaking, they are now standing on a reproductive cliff.

These women are highly educated, very successful in their chosen professions, and distinctly cosmopolitan. Some wonder what they “have done wrong” to miss out on the expected life milestone of partner and children. Even as they put themselves out there online and in person, these women are frustrated by their limiting partnering options.

The obvious question has to be: where have all the good men gone?

Guardian 2017-07-07

LECTURES & WORKSHOPS

Sperm Preparation Workshop

On the 13th of October we held a basic training workshop in the art of sperm preparation at Nidacon premises.

Participants from Korea, Finland, France, Poland and the United Kingdom enjoyed a day with product information, lectures and hands-on semen preparation in the laboratory.



The hands-on workshop included how to select the adequate gradient and implement a proper preparation, freezing and thawing of sperm to optimize survival and motility, proper technique for using the ProInsert™ and assessment of sperm vitality with SpermVitalStain™.

The workshop was very appreciated by the attendees and the mix of nationalities also opened up for a lot of discussions and exchange of experiences between the participants.

Look out for our upcoming workshops!



Marketing
Mr. Anders Edvardsson
Direct +46-31-703 06 XX
anders@nidacon.com

Equine Semen Preparation

with Professor Marco Alvarenga, Sao Paulo, Brazil the developer of BotuCrio and BotuSemen.



Nidacon held a workshop in October featuring our equine products. Nidacon was visited by professor Marco Alvarenga from Sao Paulo University and Botupharma. We all enjoyed an informative and interesting presentation of the Nidacon equine products, followed by hands-on demonstrations in the Nidacon laboratory.

The delegates and the Nidacon staff were very satisfied with the day.



Animal Product Specialist
Ms. Anna Nilang
Direct +46-31-703 06 38
anna@nidacon.com

► Upcoming events

■ 73rd ASRM Congress
Advancing reproductive
medicine Build healthy
families.
October 28 – November 1,
2017, San Antonio, USA



■ ISEAR – Simposio Suramericano
de reproducción en equinos
14 - 17 Noviembre, 2017,
El Pórtico, Colombia



■ AAEP 2017 – American
Association of Equine
Practitioners Annual Meeting
November 17-21, 2017,
San Antonio, USA.



■ The 8TH Congress of the Asia
Pacific Initiative on Reproduction,
April 12-15, 2018,
Taipei, Taiwan



■ Swedish Society for
Reproductive Medicine,
April 13-14, 2018,
Stockholm, Sweden



■ The 12TH
Biennial Conference,
May 17-20, 2018,
Reykjavik, Iceland



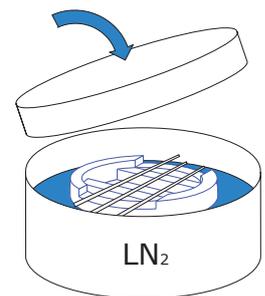
► Updating of our instructions – SpermCryoProtect™

We recently realised after discussing with a customer that we can clarify our instructions for freezing sperm further.



We give instructions on how to put the straws on Styrofoam above the liquid nitrogen. It is, however, advisable to have the liquid nitrogen in a box which can be closed and close it during the freezing procedure.

This we will add in the instructions and we thank the customer for the input. Always remember that your input is important for our development. If you, until now have performed the freezing procedure without a lid it has most likely not affected your results but more likely the amount of liquid nitrogen needed due to evaporation.



► Who to contact



Product Manager
Ms. Ann-Sofie
Forsberg
ann-sofie@nidacon.com
Tel: +46-31-703 06 42



Logistics
Mr. Dennis
Johansson
dennis@nidacon.com
Tel: +46-31-703 06 37

