Magapor

SPECIALISTS
IN SWINE
REPRODUCTION

Magapor: Keys to success

Raquel Ausejo Marcos.
Biotechnology R+d Manager

Magapor

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- Extender: Characteristics & Quality control
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History of Magapor

Magapor

History of Magapor

Timeline

1990
Foundation of Magapor
The Mena Gericó brothers create Magapor

1993
Internationalization.
Our first offices in Portugal, to continue later in Hungary, Mexico, Italy, China and USA.

2000
After years of research, Magapor manufactures its first long term extender.

2006
First edition of the International Technical Meeting of Magapor ITM, then known as Veterinary Technical Meeting.

History of Magapor

Timeline

2008
Inauguration of the new facilities that will allow to produce more and to improve the equipment of R & D

2011
Development of the Integrated System for artificial insemination centers SIM.

2014
Magapor and the University of Zaragoza discover reprotoxic compounds. From this finding, Magapor implements its RTC control.

2020
Magapor is consolidated as a world leader in swine reproduction.

History of Magapor

Our state-of-the-art facilities, allow us carrying out productive processes with the last technology and biosafety.

History of Magapor

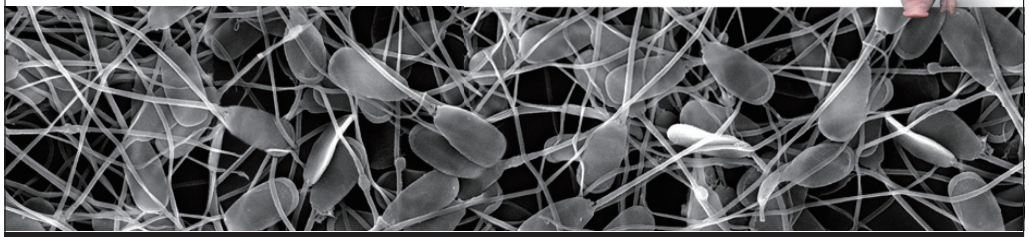
ITM Magapor
INTERNATIONAL TECHNICAL MEETING
2006 → 2017

- **Worldwide** reference congress
- **Prestigious international speakers**
- **Innovative topics and practice**, according to the sector requirements
- **Knowledge and experiences exchange forum**
- **2017: 340 attendants, 32 countries, 5 days, 17 meetigns Practical Workshops**

History of Magapor

We are **specialists** in swine reproduction, KEYPOINT to be world **leader** in our market

猪人工授精专家，使我们成为行业的先锋企业。



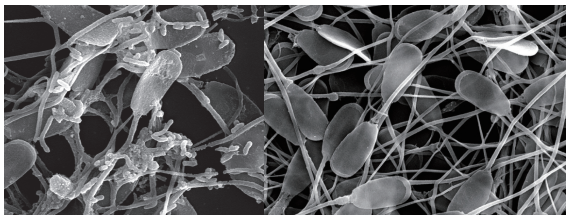
Extender: Characteristics & Quality Control

Extender: Characteristics & Quality Control

Dicol

Magapor developed **DICOL**, a collection extender designed to solve contamination problems, that has to be used before the final dilution.

Magapor 研发的**DICOL**,产品专门用于公猪精液收集，对原精迅速清洁和控制细菌，在精液稀释之前使用。



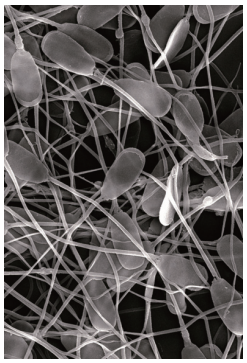
Extender: Characteristics & Quality Control

MAXIMUM PERFORMANCE FOR TOTAL SAFETY AND EFFICIENCY

For years, extenders have been classified according to their **preservation capacity in time** into short, mid, and long term. Magapor also takes into account other criteria for classification, because most **semen doses are used in the first 72 hours** after preparation.

The viability of semen doses may be compromised by the **boar effect** and at **some critical points** of their **processing, transportation, preservation** and application, thus affecting the reproductive results of the sows.

NOT JUST A QUESTION OF TIME,
BUT A MATTER OF SAFETY AND EFFICIENCY



High performance extenders: Which to chose, VITASEM or DURAGEN?

DURAGEN and **VITASEM** result from years of research, development and continuous improvement as a response to today requirements in the worldwide pig reproduction.

DURAGEN provides additional advantages over VITASEM:

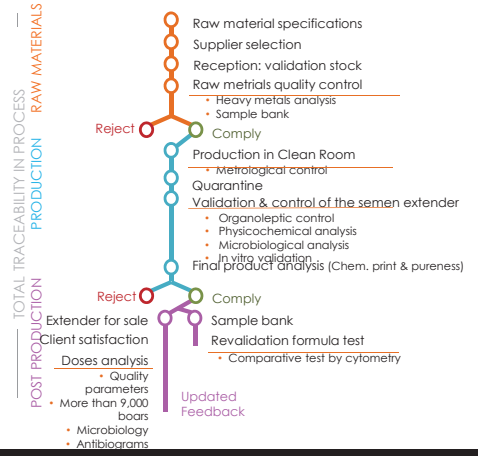
- A higher protection **against the lipid peroxidation** of the membrane thanks to its specific combination of **last generation antioxidants**.
- A broader spectrum antibacterial action.
- DURAGEN is specially indicated for the **most demanding situations**, such as boar studs with strict internal quality controls, for international shipping of doses, for doses of high genetic value or longer preservation periods.

DURAGEN, THE IDEAL SOLUTION FOR THE BEST RESULTS

STRICT AND DISTINCT QUALITY CONTROLS, TOTAL TRACEABILITY

Magapor applies the **strictest quality controls** to its high performance extenders.

We have **total traceability** of the product batches Since the reception of raw materials, to the final product served to each customer.



How to avoid reproductive toxicity due to plastics

AUTOMATIC SEMEN BAG

AUTOMATIC SMALL BAG

Reproductive toxicity

It is an adverse effect on reproductive capacity generated by a chemical or biological compound; **not detectable by the quality control of a dose at the boar stud**, because spermatozoa show normal sperm motility and concentration values.

Any compound, in enough concentration, can be toxic.

Toxicology is thus one of the most complex sciences because it must evaluate the effect of any substances on biological functions considering dosage and the combined effect of the substances.

How to avoid reproductive toxicity due to plastics

Potentially toxic substances may come from two sources.

They may be transferred either from the chemical compounds usually found in plasticizers and **NIAs (Non Intentionally Added Substances)** incorporated during the production process of plastic or from adhesives.

Reproductive toxicity can be present in any plastic material that can be heat-sealed contains plasticizers.

How to avoid reproductive toxicity due to plastics

Implemented in 2010 within Magapor's Quality process, the Reproductive Toxicity Control is a set of quality control tools used by Magapor to test its blisters for packaging semen doses at a chemical and biological level.

RTC Reproductive Toxicity Control

Control of | Phthalates, PVC, BPA, BADGE, Cyclic Lactone

With the objective of guaranteeing total traceability of every batch, the RTC work system identifies each production unit and combines manufacturate date, origin and the reference of the raw material to create batch codes.

We thus launch a product line free of Phthalates, PVC, BPA, BADGE and Cyclic Lactone to the specialized market of pig reproduction.

How to avoid reproductive toxicity due to plastics

SCIENTIFIC REPORTS

OPEN

Compounds from multilayer plastic bags cause reproductive failures in artificial insemination

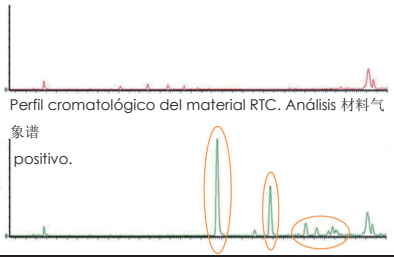
NATIONAL GEOGRAPHIC Daily News

Infertility in Spanish Pigs Has Been Traced to Plastics. A Warning for Humans?

A scientist has connected infertility in pigs to compounds in plastic bags.

How to avoid reproductive toxicity due to plastics

RTC Reproductive Toxicity Control 毒性检测



Perfil cromatológico del material RTC. Análisis 材料气象谱 positivo.

TRAZABILIDAD TOTAL EN EL PROCESO

MATERIAS PRIMAS

- Especificaciones de materia prima Norma (UE) Nº 10/2011
- Evaluación y selección de proveedores
- Control de recepción de materia prima
  - Informe por parte del proveedor
- Banco de muestras
- Cuarentena
- Análisis de reprotóxicos en materias primas
  - Control molecular
- Rechazo / Conforme

FABRICACIÓN

- Proceso de fabricación
  - Instalaciones propias
  - Controles metrológicos
  - Trazabilidad de producto
- Cuarentena
- Control de calidad. Producto terminado
  - Test de funcionalidad espermática
  - Test de fecundación in vitro
- Banco de muestras
- Rechazo / Conforme

POST FABRICACIÓN

- Producto para venta

Post cervical artificial Insemination

1.-Insemination cervical/post-cervical/intra-uterine
人工授精 子宫颈/后宫颈/子宫角

*"Consists in the deposition, of the content of a seminal dose, with a simple or complex catheter, **through the cervix**, in the proximal region of the cervix (1), in the **uterine body** (2), or into the **uterine horn** (3)"*

把公猪精液通过简易或者复杂的输精管，通过子宫颈，输送子宫颈（1）的近端区域，在子宫体（2），或进入子宫角（3）"

Post cervical artificial Insemination

Volume and concentration体积和密度

- Normally, are used: 常规

  45 ml y 1500 million of useful spz .45毫升和15亿有效精子

- Also, are used: 也可以使用

  30 ml y 1000 million of useful spz. 30毫升和10亿有效精子

The doses production technique and the quality of the semen is critical when using PCIA

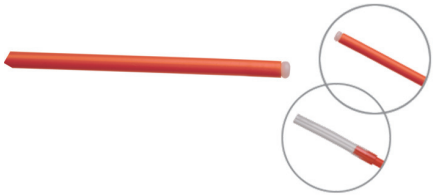
使用后宫颈人工授精技术时，精子质量很重要

30-45 ml

Post cervical artificial Insemination

FOAM 海绵头

Less agressive侵略性少
Adaptation适应性强
Stimulation促进发情
Reduces backflow减少回流



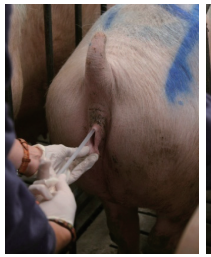
Inner内管 catheter MAGAPLUS S

Soft and flexible, tip specially designed for a safe introduction

内管柔软，有韧性，更安全。

头部特殊设计，光滑的白色小头，对母猪宫颈没有损伤。

Post cervical artificial Insemination



Post cervical artificial Insemination

Remember:

Check the catheter for confirming that everything is ok!

注意:

使用前先检查精液管，确保一切正常

THANK YOU

Magapor S.L.
PCTA Valdeferrín-AulaDei · Calle 5
50600 · Ejea de los Caballeros · Zaragoza
Tel: (+34) 976 662 914
Fax: (+34) 976 671 888
magapor@magapor.com
www.magapor.com