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# POULTRY

## Product guide

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# Introduction

MSD Animal Health is the leading provider of poultry vaccines and parasite control products to the African poultry industry. We are dedicated to improving and preserving the health, well-being and performance of poultry.

Today's poultry industry demands innovative approaches to emerging diseases. At MSD Animal Health, we strive to offer products and services that make a difference for improved flock performance and profitability. Our broad vaccine range offers protection against many respiratory diseases and intestinal conditions to help improve well-being and performance. Our enriched portfolio provides innovative solutions to provide superior protection from the hatchery to the breeding and production stages of your flock.

Innovax®, Nobilis® and Protectotype are just some of the well known brands that are part of our Protected Chick programme in the hatchery that allows for less on-farm vaccination, handling and cold chain management.

On-farm, our Protected Pullet programme contains some of the most comprehensive breeder and layer vaccines, ensuring better production and profitability. To best serve our customer needs, the African poultry team focuses on partnering with our customers to prevent disease and minimise production losses within their flocks.

Our team provides services to help poultry producers both in hatcheries and on farm. The services include support, training, flock health monitoring and auditing, to ensure uniform and consistent administration of our vaccines and parasite control products.





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Nobilis® ILT  
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Nobilis® Reo 2177  
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Nobilis® SG 9R  
Tremvac FP

## Monovalent inactivated vaccines

Nobilis® Coryza  
Nobilis® Corvac-4  
Nobilis® EDS  
Nobilis® Gumboro Inac  
Nobilis® MG Inac  
Nobilis® ND Broiler  
Nobilis® Newcavac  
Nobilis® Reo Inac  
Nobilis® RT Inac  
Nobilis® Salenvac T

## Multivalent inactivated vaccines

Nobilis® G+ND  
Nobilis® IB+ND+EDS  
Nobilis® IB Multi+ND  
Nobilis® IB Multi+ND+EDS  
Nobilis® IB+G+ND  
Nobilis® IB+ND  
Nobilis® Reo+IB+G+ND  
Nobilis® RT+IB Multi+G+ND

## Pharmaceuticals

Exzolt® 10mg/ml Oral Solution  
Oxitril  
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Nobilis® CA Diluent  
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Dilavia  
Sterile diluent for wing-web  
Sterile diluent Type A Blue  
Sterile dye





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# Newcastle Disease



## Newcastle Disease

# NOBILIS® ND C2

Reg. No. G2872 (Act 36/1947)  
Namibia Reg. No. V05/24.3/455 **NSO**  
Zambia Reg. No. 331/722V



### INDICATIONS

Nobilis® ND C2 is a live freeze-dried vaccine, indicated for the primary vaccination of chickens at 1 day of age or older against Newcastle Disease.

### COMPOSITION

Each dose of Nobilis® ND C2 contains at least  $10^6$  EID<sub>50</sub> of live, attenuated Newcastle Disease virus (NDV) strain C2. The virus is propagated in specific pathogen free eggs.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Do not open and reconstitute Nobilis® ND C2 until ready to start vaccination. Reconstituted vaccine should be used within 2 hours after reconstitution.

### ADMINISTRATION

Nobilis® ND C2 may be administered by spray or eye drop application.

### VACCINATION PROGRAMME

Nobilis® ND C2 is safe for use as a primary vaccination from 1 day of age onwards. The optimum time and method of the first administration and revaccination with a secondary vaccine depends largely upon the local situation. Therefore, the advice of a veterinary surgeon should be sought.

### IMMUNITY

Duration and intensity of the immune reaction and the establishment of a solid immunity are dependent on the possible presence of maternal antibodies and in general on the health and condition of the chickens. Hygiene and management are also important in the post vaccination period.

### STORAGE

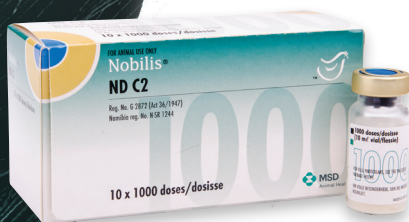
- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days of slaughter.

### PRESENTATION

Vials containing 1 000 and 2 500 doses.





## Newcastle Disease

# NOBILIS® ND CLONE 30

Reg. No. G2466 (Act 36/1947)  
Ethiopia Reg. No. INT/NET/002  
Namibia Reg. No. V98/24.3/672 [NSO]  
Zimbabwe Reg. No. 94/80.23.10/9363

### INDICATIONS

A live freeze-dried vaccine to prevent Newcastle Disease in chickens. It is administered via coarse spray or eye drop method.

### COMPOSITION

Nobilis® ND Clone 30 contains a live freeze-dried vaccine virus strain Clone 30. Each dose contains at least  $10^6$  EID<sub>50</sub> of the Newcastle Disease vaccine virus strain Clone 30. The vaccine pellet contains stabilisers and gentamycin.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

The vaccine may be administered by coarse spray or eye drop installation. (For eye drop application, the MSD Diluent Oculo-Nasal may be used).

### VACCINATION PROGRAMME

Nobilis® ND Clone 30 is safe to use from day 1 of age onwards. The optimum time and method of administration depends largely upon the local situation. Therefore, the advice of a veterinary surgeon should be sought.

### IMMUNITY

An adequate immunity against Newcastle Disease will last for approximately 6 weeks. In areas where Newcastle Disease is endemic (high risk areas) a second vaccination with Nobilis® ND Clone 30 should be given within approximately 2 to 4 weeks after the first. Consult your veterinarian. Emergency vaccination during the laying period may be accompanied by a transient drop in egg production.

### STORAGE

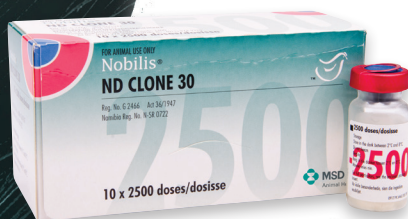
- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from direct sunlight.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days of slaughter.

### PRESENTATION

Vials containing 1 000, 2 500 or 5 000 doses.





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# Infectious Bronchitis



## Infectious Bronchitis

# NOBILIS® IB MA5

Reg. No. G2300 (Act 36/1947)  
Namibia Reg. No. V97/24.3/822 [NSO]  
Uganda Reg. No. NDA/MAL/VDP/9156  
Zimbabwe Reg. No. 2015/80.23.17/9724  
Zambia Reg. No. 331/706V



### INDICATIONS

Nobilis® IB Ma5 is a live attenuated vaccine to prevent Infectious Bronchitis (Massachusetts type) in chickens (via eye drop application or spray administration).

### COMPOSITION

Each dose of freeze-dried Nobilis® IB Ma5 contains at least  $10^{3.0}$  EID<sub>50</sub> Infectious Bronchitis virus strain Ma5 (serotype Massachusetts). The vaccine pellet contains stabilisers and gentamycin.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

#### ADMINISTRATION

The vaccine may be administered by coarse spray or eye drop installation. (For eye drop application, the MSD Diluent Oculo-Nasal may be used).

#### VACCINATION PROGRAMME

The optimum time and method of administration depend largely upon local situation. The advice of a veterinary surgeon should be sought. The vaccine is safe to use from 1 day of age onwards.

#### Guidelines

**Broilers:** Vaccination at day old by coarse spray or eye drop route.

**Layers and Breeders:** Vaccination at day old by coarse spray or eye drop route.

**Revaccination:** At approximately 6 weeks of age by coarse spray or the eye drop methods.

#### IMMUNITY

After a first vaccination an adequate immunity against Massachusetts type of IB will last for approximately 6 weeks, provided that the vaccine is properly administered.

### STORAGE

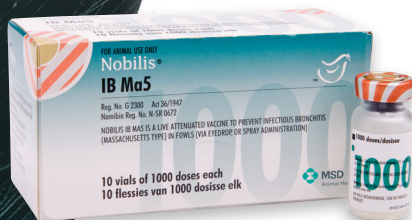
- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures.
- Protect from exposure to direct sunlight.
- The diluent may be stored at room temperature between 20 °C and 25 °C.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days of slaughter.

### PRESENTATION

Vials containing 1 000, 2 500 or 5 000 doses.





## Infectious Bronchitis

# NOBILIS® IB 4-91

Reg. No. G4031 (Act 36/1947)  
Kenya Reg. No. VMD 2019/20735-II  
Namibia Reg. No. V13/24.3/1200 [NSO]  
Uganda Reg. No. NDA/MAL/VDP/9154  
Zimbabwe Reg. No. 2014/80.23.17/9703

### INDICATIONS

Nobilis® IB 4-91 is a live attenuated, freeze-dried vaccine against Infectious Bronchitis virus serotype 4-91 or serologically related types for administration to 1-day-old chicks and older chickens (broilers, breeders, layers).

### COMPOSITION

Each dose contains at least  $\log_{10}$  3,6 EID<sub>50</sub> of live attenuated avian Infectious Bronchitis Virus (IBV) strain 4-91 in stabiliser.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Do not open and reconstitute the vaccine until ready to start vaccination. Reconstituted vaccine should be used within 2 hours after reconstitution.

### DOSAGE AND ADMINISTRATION

The optimum time and method of administration depend largely upon the local situation and veterinary advice should be sought on a site basis. The vaccine may be administered by coarse spray, drinking water or via the intranasal/ocular route.

### VACCINATION PROGRAMME

The vaccine can be administered to day-old chicks and older chickens by coarse spray or by administration via the intranasal/ocular route. The vaccine can be administered to chickens of 7 days and older, via drinking water. For prolonged immunity, chickens should be revaccinated 6 weeks after the initial administration.

### IMMUNITY

After vaccination, an adequate immunity against Infectious Bronchitis serotype 4-91 and serologically related serotypes will last for at least 6 weeks, provided that the vaccine is properly administered. Immunogenicity of the vaccine antigen will be reduced by poor storage or inappropriate administration. For further information on use of a vaccine in specific circumstances or in conjunction with other MSD vaccines, consult MSD's technical staff.

Protectotype



### STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- The vaccine should be used within 2 hours after reconstitution and should not be stored.
- Protect from exposure to direct sunlight.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days of slaughter.

### PRESENTATION

Vials containing 1 000, 2 500 or 5 000 doses.





## Infectious Bronchitis

# NOBILIS® IB PRIMO QX

Reg. No. G4211 (Act 36/1947)



### INDICATIONS

For the active immunisation of chickens from 1-day-old or older to reduce clinical signs of disease caused by infection with Infectious Bronchitis Virus serotype D388/QX.

### COMPOSITION

Each dose of reconstituted vaccine contains:

Live Avian Infectious Bronchitis Virus strain D388:  $\geq 10^{4.0}$  EID<sub>50</sub><sup>1</sup>

<sup>1</sup>EID<sub>50</sub> = 50 % Egg Infective Dose

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### DOSAGE AND ADMINISTRATION

After reconstitution administer at least 1 dose of the vaccine per chicken by coarse spray or intranasal/ocular administration (eye drop) to chickens from 1 day of age or older.

### IMMUNITY

Onset of immunity: 3 weeks

Duration of immunity: 8 weeks

### STORAGE

- Store between 2 °C and 8 °C.
- Do not freeze.
- Protect from light.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days of slaughter.

### PRESENTATION

Sealed aluminium laminated cups containing 1 000, 5 000 or 10 000 doses.





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# Newcastle Disease and Infectious Bronchitis Combination



## Newcastle Disease and Infectious Bronchitis Combination

# NOBILIS® MA5 + CLONE 30

Reg. No. G2301 (Act 36/1947)  
Kenya Reg. No. VMD 2019/20529-II  
Namibia Reg. No. V97/24.3/829 [NSO]  
Uganda Reg. No. NDA/MAL/VDP/9554  
Zimbabwe Reg. No. 94/80.23.17/9385  
Zambia Reg. No. 331/708V

### INDICATIONS

Nobilis® Ma5 + Clone 30 is a live attenuated freeze-dried vaccine used for the immunisation of healthy chickens against the Massachusetts type of serologically related types of Infectious Bronchitis and against Newcastle Disease.

### COMPOSITION

Each dose of vaccine contains at least  $10^{3.8}$  EID<sub>50</sub> Infectious Bronchitis virus strain Ma5 (serotype Massachusetts) and  $10^6$  EID<sub>50</sub> of the Newcastle Disease strain Clone 30. As gentamycin is used during the production process, traces may be present in the final product.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

#### ADMINISTRATION

Administration by coarse spray or eye drop route gives the best response. These should be the methods of choice, especially when vaccinating young chickens.

#### VACCINATION PROGRAMME

The optimum time and method of administration depends largely upon local situation. The advice of a veterinary surgeon should be sought. The vaccine is safe to use from 1 day of age onwards.

#### IMMUNITY

An adequate immunity against ND and the Massachusetts type of IB will last for approximately 6 weeks, provided that the vaccine is administered correctly. In areas where ND is endemic, a second vaccination with Nobilis® ND Clone 30 should be given at an age of approximately 4 weeks. Emergency vaccination during the laying period may be accompanied by a transient drop in egg production.

### STORAGE

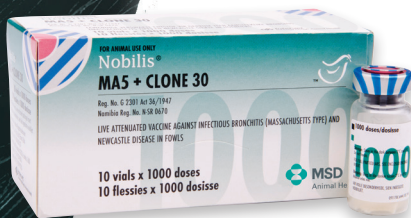
- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures.
- Protect from exposure to direct sunlight.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days of slaughter.

### PRESENTATION

Vials containing 1 000 or 2 500 doses.





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# Infectious Bursal Disease (IBD/Gumboro)



## Infectious Bursal Disease (IBD /Gumboro)

# UNIVAX-BD<sup>®</sup>

Reg. No. G3674 (Act 36/1947)  
Namibia Reg. No. V07/24.3/752 **NSO**  
Zimbabwe Reg. No. 2015/80.23.17/9710



### INDICATIONS

For use as an aid in the prevention of Infectious Bursal Disease (Gumboro) in chickens.

### COMPOSITION

Univax-BD<sup>®</sup> is a live virus vaccine containing a mild strain (ST-12) of Infectious Bursal Disease (Gumboro) virus grown in tissue culture and combined with stabilising agents and gentamycin as preservative. Univax-BD<sup>®</sup> is supplied as a lyophilised vaccine contained in vials sealed under vacuum.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

Vaccinate 18 to 19 day old embryonated chicken eggs by the *in ovo* route using an *in ovo* system or subcutaneously at 1 day of age or by drinking water at 1 week or older. Good management practices should be followed to reduce exposure of chickens to virulent Infectious Bursal Disease (Gumboro) virus during the first few weeks of life.

### STORAGE

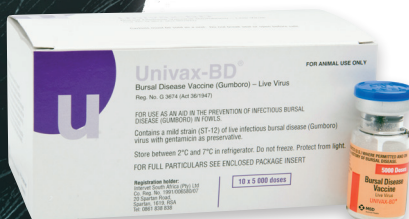
- Store between 2 °C and 7 °C.
- Do not freeze.
- Protect from light.

### WITHDRAWAL PERIOD

Do not slaughter chickens for human consumption within 21 days after vaccination.

### PRESENTATION

Vials containing 5 000 doses.





## Infectious Bursal Disease (IBD /Gumboro)

# NOBILIS® GUMBORO D78

Reg. No. G2483 (Act 36/1947)  
Ethiopia Reg. No. INT/NET/005  
Kenya Reg. No. VMD2019/20531-II  
Namibia Reg. No. V98/24.3/667 NSO  
Uganda Reg. No. NDA/MAL/VDP/9155  
Zimbabwe Reg. No. 94/80.23.17/9366  
Zambia Reg. No. 331/718V

### INDICATIONS

For use as an aid in the prevention of Infectious Bursal Disease (Gumboro) in chickens.

### COMPOSITION

Nobilis® Gumboro D78 is a live, freeze-dried vaccine containing live Infectious Bursal Disease (Gumboro) virus strain D78 with stabilisers.

Each dose of Nobilis® Gumboro D78 contains at least  $4,0 \log_{10}$  TCID<sub>50</sub> of Infectious Bursal Disease (Gumboro) virus strain D78.

The freeze-dried vaccine pellet contains stabilisers and gentamycin.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

#### ADMINISTRATION

Nobilis® Gumboro D78 may be administered via drinking water, via spray administration or via the intranasal or intraocular method.

#### VACCINATION PROGRAMME

Nobilis® Gumboro D78 may be administered to chickens at 7 to 28 days of age. Strain D78 is effective in the face of the maternally derived antibody level usually existing in flocks at 7 to 28 days of age. The optimum time of vaccination depends on the height of the maternally derived antibody level. In case the antibody level is very variable it is advised to vaccinate the chickens twice with an interval of 1 week.

Nobilis® Gumboro D78 may be safely administered at 1-day-old to chickens with no or a low level of maternal antibodies. The optimum time and method of administration depends largely upon the local situation. Therefore, the advice of a veterinary surgeon should be sought.

### IMMUNITY

The first signs of the antibody response are observed 1 week after vaccination.

### STORAGE

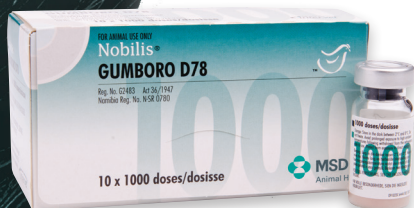
- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Protect from exposure to direct sunlight.

### WITHDRAWAL PERIOD

None.

### PRESENTATION

Vials containing 1 000, 2 500 and 5 000 doses.





## Infectious Bursal Disease (IBD /Gumboro)

# NOBILIS® GUMBORO 228E

Reg. No. G2423 (Act 36/1947)  
Namibia Reg. No. V16/24.3/1371 **NSO**  
Uganda Reg. No. NDA/MAL/VDP/9292  
Zimbabwe Reg. No. 95/80.23.10/9389  
Zambia Reg. No. 331/715V

### INDICATIONS

Nobilis® Gumboro 228E is a live vaccine for the active immunisation of chickens against Infectious Bursal Disease (Gumboro).

### COMPOSITION

Nobilis® Gumboro 228E contains  $2,0 \log_{50}$  EID<sub>50</sub> of live Gumboro Disease virus strain 228E per dose. The freeze-dried vaccine pellet contains stabilisers and gentamycin.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

#### ADMINISTRATION

The vaccine is administered through the drinking water at 1 dose per chicken. The vaccine should be dissolved in an amount of water, which will be consumed by the chickens within 2 hours.

#### VACCINATION PROGRAMME

The vaccine virus strain 228E is a less attenuated intermediate IBDV strain. As a result of this, the virus is capable of breaking through the maternal immunity at an earlier stage and will spread better through the vaccinated flock. The age at which the chickens can be successfully vaccinated depends on the level of maternally derived antibodies (MDA) and therefore on the type of flock and on the way the parent flock had been vaccinated.

The optimum time and method of administration depends largely upon the local situation. Therefore, the advice of a veterinary surgeon should be sought.

#### IMMUNITY

The first signs of the antibody response are observed 1 week after vaccination.

### STORAGE

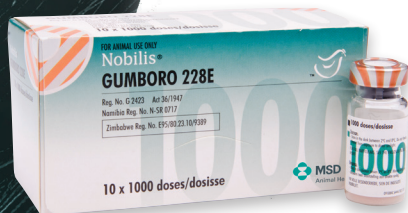
- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Use the vaccine within 2 hours after reconstitution.
- Protect from exposure to direct sunlight.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days before slaughter.

### PRESENTATION

Vials containing 1 000, 2 500 and 5 000 doses.





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# Coccidiosis



Coccidiosis

# FORTEGRA®

Reg. No. G4208 (Act 36/1947)



## INDICATIONS

Fortegra® is indicated for the vaccination of healthy broilers at 1-day-old via spray cabinet administration as an aid in the prevention of coccidiosis due to *Eimeria mivati* and *Eimeria tenella* and as an aid in the reduction of lesions related to *Eimeria acervulina* and *Eimeria maxima* in chickens.

## COMPOSITION

Fortegra® contains live oocysts of coccidia: *E. acervulina*, *E. maxima*, *E. maxima* MFP, *E. mivati* and *E. tenella*.

Preservative: Gentamycin.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

Spray cabinet administration.

The vaccine should be prepared or mixed at the rate of 210 ml of distilled water per 1 000 doses of vaccine.

### STORAGE

- Store between 2 °C and 8 °C.
- Do not freeze. Freezing this vaccine will inactivate it. Do not under any circumstances use this vaccine if it has been frozen.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days of slaughter.

### PRESENTATION

Vials containing 1 000 or 10 000 doses.





Coccidiosis

# PARACOX®-5

Reg. No. G2817 (Act 36/1947)



## INDICATIONS

For the active immunisation of broilers against *Eimeria acervulina*, *E. maxima*, *E. mitis* and *E. tenella*.

## COMPOSITION

Paracox®-5 is a translucent, aqueous suspension of oocysts derived from 5 precocious lines of coccidia, presented as a live, attenuated oral vaccine. Each 0,004 ml dose of vaccine contains the following numbers of sporulated oocysts derived from precocious lines of coccidia:

<i>E. acervulina</i> HP	500 - 650
<i>E. maxima</i> CP	200 - 230
<i>E. maxima</i> MFP	100 - 130
<i>E. mitis</i> HP	1 000 - 1 300
<i>E. tenella</i> HP	500 - 650

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

TO BE USED FOR THE IMMUNISATION OF BROILERS ONLY.

## ADMINISTRATION

A single dose of Paracox®-5 should be administered to chicks by hatchery spray. The minimum dose of vaccine is 0,004 ml per chick. Each 4 ml vial will provide sufficient vaccine for 1 000 chicks, and each 20 ml vial will provide sufficient vaccine for 5 000 chicks.

## STORAGE

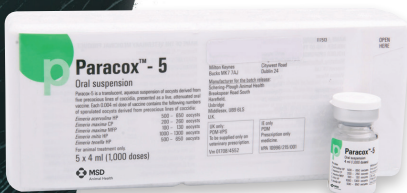
- Store in a refrigerator between 2 °C and 8 °C.
- Do not freeze. Freezing this vaccine will inactivate it. Do not under any circumstances use this vaccine if it has been frozen.
- Protect from light.

## WITHDRAWAL PERIOD

Do not vaccinate within 21 days before slaughter.

## PRESENTATION

Vials containing 1 000 doses or 5 000 doses.





## Coccidiosis

# PARACOX®-8

Reg. No. G1994 (Act 36/1947)  
Kenya Reg. No. VMD 2019/20736-II  
Namibia Reg. No. V01/24.3/517[NSO]  
Zimbabwe Reg. No. 94/80.23.17/9372  
Zambia Reg. No. 331/711V



### INDICATIONS

For the active immunisation of chickens against *Eimeria acervulina*, *E. brunetti*, *E. maxima*, *E. mitis*, *E. necatrix*, *E. praecox* and *E. tenella*.

### COMPOSITION

Paracox®-8 is a translucent, viscous suspension of oocysts derived from 8 precocious lines of coccidia, presented as a live, attenuated, oral vaccine.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

#### ADMINISTRATION

Paracox®-8 is for oral administration to chickens from 1 day of age by hatchery spray, or by drinking water from 5 to 9 days old.

#### VACCINATION

The minimum dose of vaccine is 0,1 ml per chicken. Each 100 ml sachet will provide sufficient vaccine for 1 000 chickens and each 500 ml sachet will provide sufficient vaccine for 5 000 chickens.

#### IMMUNITY

Food and water provided at any stage before or after vaccination must be free from anticoccidial agents including sulphonamides as well as antibacterial agents that have anticoccidial activity (viz. oxytetracycline, chlortetracycline, furazolidone, nitrofurazone). Since immunity to coccidial infection following Paracox®-8 administration is enhanced by natural challenge, it should be noted that access to any agents with anticoccidial activity at any time following vaccination may reduce the duration of effective immunity.

The vaccine will not actively immunise avian species other than the chicken against coccidiosis.

### STORAGE

- Store between 2 °C and 8 °C.
- Do not freeze. Freezing this vaccine will inactivate it. Do not under any circumstances use this vaccine if it has been frozen.
- Protect from light.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days before slaughter

### PRESENTATION

Sachets containing 1 000 or 5 000 doses.





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# Marek's Disease



## Marek's Disease



# NOBILIS® RISMAVAC

Reg. No. G2444 (Act 36/1947)  
Ethiopia Reg. No. INT/NET/07  
Kenya Reg. No. VMD 2019/20527-II  
Namibia Reg. No. V98/24.3/674[NSO]  
Zambia Reg. No. 331/725V  
Zimbabwe Reg. No. 94/80.23.10/9362

### INDICATIONS

Nobilis® Rismavac is a live vaccine recommended for the immunisation of healthy day-old chicks against Marek's Disease and is also indicated where virulent strains of Marek's Disease are prevalent.

### COMPOSITION

Nobilis® Rismavac is a live vaccine containing Marek Disease virus serotype 1, strain CVI-988. Each dose of Nobilis® Rismavac contains at least  $3,0 \log_{10}$  TCID<sub>50</sub> serotype 1, strain CVI-988, in the cell associated form, as a suspension of virus containing SPF chicken embryo fibroblasts. The vaccine contains stabilisers and antibiotics.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Nobilis® Rismavac should be administered using Nobilis® CA Diluent. The sachet of mixed vaccine should be kept in an ice bath and swirled frequently.

### ADMINISTRATION

The vaccine is injected subcutaneously in the neck using an automatic syringe.

Inject 0,2 ml per chick. The entire contents of the sachet must be used within 2 hours of mixing and any remaining vaccine should be discarded according to local waste disposal regulations.

### VACCINATION PROGRAMME

Vaccinate chicks in the hatchery.

### STORAGE

- The vaccine containing ampoules (which are inserted in metal canes) are stored in liquid nitrogen (-100 °C or below).
- Only 1 ampoule should be removed at any one time.
- The cane holding the remaining ampoules should be replaced immediately in the canister of the liquid nitrogen container.

- The contents of the removed ampoule should rapidly be thawed by immersing in water at room temperature (20 °C to 25 °C).
- The Liquid Nitrogen Container must be stored in an upright position in a dry, well-ventilated area away from incubator intakes and chicken boxes.
- The diluent is stored at room temperature (20 °C to 25 °C).

### WITHDRAWAL PERIOD

None.

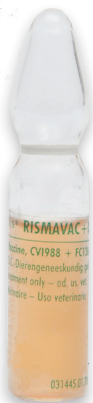
### PRESENTATION

Glass ampoules containing 1 000 doses or 2 000 doses of vaccine.  
Nobilis® Diluent CA is available in 200 ml, 400 ml or 800 ml.






Marek's  
Disease



# NOBILIS® RISMAVAC + CA126

Reg. No. G2632 (Act 36/1947)  
Kenya Reg. No. VMD 2019/20525-II  
Namibia Reg. No. V05/24.3/659 



## INDICATIONS

Nobilis® Rismavac + CA126 is a combined live, cell-associated Marek's Disease vaccine recommended for the immunisation of healthy chicks against Marek's Disease.

## COMPOSITION

Nobilis® Rismavac + CA126 is a combined live vaccine containing FC-126 (serotype 3) strain of Turkey Herpes Virus and CVI-988 (serotype 1) strain of Fowl Herpes Virus.

Each dose of Nobilis® Rismavac + CA126 contains at least 3,0 log<sub>10</sub> PFU of live Turkey Herpes Virus strain FC-126 (serotype 3) and at least 3,0 log<sub>10</sub> PFU of live Fowl Herpes Virus strain CVI-988 (serotype 1) in the cell-associated form, as a suspension of virus containing SPF chicken embryo fibroblasts.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Nobilis® Rismavac + CA126 should be administered using Nobilis® CA Diluent. The sachet of mixed vaccine should be kept in an ice bath and swirled frequently. **Do not use in conjunction with another vaccine containing a classical HVT strain or any other HVT recombinant vaccine.**

## ADMINISTRATION

The vaccine is injected subcutaneously in the neck.  
Inject 0,2 ml per chick. The bag of vaccine should be kept in an ice bath and swirled frequently. The entire contents of the bag must be used within 2 hours of mixing. Any remaining vaccine should be discarded according to local waste disposal regulations.

## VACCINATION PROGRAMME

Vaccinate chicks in the hatchery.

## STORAGE

The vaccine containing ampoules (inserted in metal canes) are stored in liquid nitrogen (-100 °C or below).

- Only 1 ampoule should be removed at any one time.

- The cane holding the remaining ampoules should be replaced immediately in the canister of the liquid nitrogen container.
- The contents of the removed ampoule should rapidly be thawed by immersing in water at room temperature (20 °C to 25 °C).
- The liquid nitrogen container must be stored in an upright position in a dry, well-ventilated area away from incubator intakes and chicken boxes.
- The diluent is stored between 20 °C and 25 °C.

## WITHDRAWAL PERIOD

None.

## PRESENTATION

Glass ampoules containing 1 000 doses or 2 000 doses of vaccine.  
Nobilis® Diluent CA is available in 200 ml, 400 ml or 800 ml.



100  
years | EXPERIENCE IN  
VACCINE R&D

# Vector Vaccines



## Vector Vaccines



# INNOVAX® ILT

Reg. No. G4093 (Act 36/1947)

## INDICATIONS

For the active immunisation of healthy 18-day-old chicken embryos by the *in ovo* route or of 18-day-old chickens by the subcutaneous route as an aid in the prevention of Marek's Disease (MDV) and Infectious Laryngotracheitis (ILT).

Experiments have shown that a vaccine dose of 905 PFU is efficacious against challenge with either MDV (88 % protection) or ILTV (97 % protection) when administered to 1-day-old chickens by the subcutaneous route of injection. A vaccine dose of 1124 PFU was efficacious against challenge with MDV and a vaccine dose of 739 PFU against challenge with ILTV when administered to 18-day-old embryonated chicken eggs by the *in ovo* route of administration.

## COMPOSITION

Each ampoule contains per dose at least 2248 PFU of live Herpes Virus of Turkey strain HVT/ILT-138 in the cell-associated form. The vaccine contains traces of gentamycin.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Single vaccination with 1 dose per animal/egg.

**Do not use in conjunction with a vaccine containing a classical HVT strain or any other HVT recombinant vaccine.**

## ADMINISTRATION

The vaccine is applied by injection. For subcutaneous vaccination 0,2 ml is injected per chicken in the neck. For *in ovo* vaccination eggs are injected at the 18th day of the embryo development using 0,05 ml per egg.

The bag of vaccine should be gently swirled frequently during vaccination. It should be stored on crushed ice if not used immediately. The entire contents of the bag must be used within 1 hours after mixing. After that any remaining vaccine should be discarded.

## VACCINATION PROGRAMME

Vaccinate chicks in the hatchery.



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## IMMUNITY

For Infectious Laryngotracheitis onset of immunity has been demonstrated in 2-week old chickens, reaching full immunity at an age of 4 weeks. Duration of immunity has been demonstrated for at least 60 weeks after a single vaccination. For Marek's Disease the onset of immunity has been demonstrated from 5 days of age and the duration of immunity will last until culling.

## STORAGE

- Ampoules: Store in a filled liquid nitrogen container.
- Nobilis® Diluent CA: Store at room temperature (15 °C to 25 °C).
- Liquid Nitrogen Container: Store liquid nitrogen container securely in an upright position in a clean, dry and well-ventilated room separated from the hatching/chicken room in the hatchery.

## WITHDRAWAL PERIOD

Withdrawal period: Do not slaughter chickens for human consumption until 21 days after vaccination.

## PRESENTATION

Glass ampoules containing 2 000 doses of vaccine.  
Nobilis® Diluent CA is available in 200 ml, 400 ml or 800 ml.



## Vector Vaccines



# INNOVAX® ND

Reg. No. G4289 (Act 36/1947)

## INDICATIONS

Innovax® ND is recommended for the active immunisation of healthy 18-day-old chicken embryos by the *in ovo* route or for 1-day-old chickens by the subcutaneous route as an aid in the prevention of Marek's Disease and Newcastle Disease.

## COMPOSITION

Each dose contains at least 1 810 PFU of live Turkey Herpes Virus strain HVT/NDV-F. The vaccine contains traces of gentamycin sulphate.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Each chicken should receive 1 dose of vaccine.

**Do not use in conjunction with another vaccine containing a classical HVT strain or any other HVT recombinant vaccine.**

## ADMINISTRATION

The vaccine is administered via injection. For subcutaneous vaccination, 0,2 ml per chick is injected in the neck. For *in ovo* vaccination, eggs are injected on the 18th day of the embryo development using 0,05 ml per egg. The bag/vial of vaccine should be swirled gently and frequently during vaccination.

It should be stored on crushed ice if not used immediately. Entire contents of the bag must be used within 1 hours after mixing. After that, any remaining vaccine should be discarded according to local waste disposal regulations.

## VACCINATION PROGRAMME

Vaccinate chicks in the hatchery.

## IMMUNITY

For Marek's Disease onset of immunity has been demonstrated after 5 days following vaccination and duration of immunity will last for the entire risk period. For Newcastle Disease, onset of immunity has been demonstrated after 2 weeks following vaccination, reaching full immunity at 4 weeks. Duration of immunity has been demonstrated for at least 60 weeks after a single vaccination. In case of high Newcastle Disease infection pressure, it may be recommended to use in addition to Innovax® ND a live Newcastle



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Disease vaccine like Nobilis® ND C2 (G2872) or Nobilis® ND Clone 30 (G2466) for vaccination of day-old chickens.

## STORAGE

- Ampoules: Store in a filled liquid nitrogen container, < -100 °C.
- Nobilis® Diluent CA: Store at room temperature between 15 °C and 25 °C.
- Liquid Nitrogen Container: Store liquid nitrogen container securely in an upright position in a clean, dry and well-ventilated room separated from the hatching/chicken room in the hatchery.

## WITHDRAWAL PERIOD

Do not slaughter chickens for human consumption until 21 days after vaccination.

## PRESENTATION

Glass ampoules containing 2 000 or 4 000 doses of vaccine.  
Nobilis® Diluent CA is available in 200 ml, 400 ml or 800 ml.



## Vector Vaccines



# INNOVAX® ND-IBD

Reg. No. G4375 (Act 36/1947)



**innovax**  
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### INDICATIONS

The vaccine is recommended for active immunisation of one-day-old chicks:

- to reduce mortality and clinical signs caused by Newcastle Disease (ND) virus,
- to prevent mortality and to reduce clinical signs and lesions of Infectious Bursal Disease (IBD) virus,
- to reduce mortality, clinical signs and lesions caused by Marek's Disease (MD) virus.

### COMPOSITION

Each dose (0,2 ml subcutaneous or 0,05 ml *in ovo*) of reconstituted vaccine contains:

Cell-associated live recombinant Turkey Herpes Virus (strain HVP360), expressing the fusion protein of Newcastle Disease virus and the VP2 protein of Infectious Bursal Disease virus:  $10^{3,3} - 10^{4,6}$  PFU<sup>1</sup>.

1 PFU: plaque forming units.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

After dilution, administer:

Subcutaneous: One single injection of 0,2 ml per chick.

**Do not use in conjunction with a vaccine containing a classical HVT strain or any other HVT recombinant vaccine.**

### ADMINISTRATION

The vaccine is administered via injection. For subcutaneous vaccination, 0,2 ml per chick is injected in the neck.

### VACCINATION PROGRAMME

Vaccinate chicks in the hatchery.

### IMMUNITY

**Onset of immunity:**

**ND:** 4 weeks,  
**IBD:** 2 weeks,  
**MD:** 9 days.

### Duration of immunity:

**ND:** 8 weeks,  
**IBD:** 8 weeks,  
**MD:** entire risk period.

### STORAGE

- Ampoules (cell suspension): Store and transport frozen in liquid nitrogen (below  $-140^{\circ}\text{C}$ ).
- Nobilis® Diluent CA: Store below  $25^{\circ}\text{C}$ .
- Container: Store liquid nitrogen container securely in upright position in a clean, dry and well ventilated room separated from the hatching/chicken room in the hatchery.

### WITHDRAWAL PERIOD

Withdrawal period: 21 days after subcutaneous injection.

### PRESENTATION

Glass ampoules containing 2 000 or 4 000 doses of vaccine.  
Nobilis® Diluent CA is available in 200 ml, 400 ml or 800 ml.



## Vector Vaccines



# INNOVAX® ND-ILT

Reg. No. G4491 (Act 36/1947)



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### INDICATIONS

Innovax® ND-ILT induces active immunity against Newcastle Disease (ND), Infectious Laryngotracheitis (ILT) and Marek's Disease (MD) in chickens. It is indicated for the active immunisation of 1-day-old chicks or embryonated chicken eggs to:

- Reduce mortality and clinical signs caused by Newcastle Disease virus.
- Reduce mortality, clinical signs and lesions caused by avian Infectious Laryngotracheitis virus and Marek's Disease virus.

### COMPOSITION

Each dose of reconstituted vaccine (0,2 ml for subcutaneous use or 0,05 ml for *in ovo* use) contains:

Active substance:

Cell-associated live recombinant turkey herpesvirus (strain HVT/NDV/ILT), expressing the fusion protein of Newcastle Disease virus and the glycoproteins gD and gI of Infectious Laryngotracheitis virus:  $10^{3.5}$  to  $10^{4.2}$  PFU'.  
'PFU – Plaque Forming Units

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

The vaccination programme consists of a single dose administered via subcutaneous injection to 1-day-old chicks, or *in ovo* injection to embryonated chicken eggs.

**Do not use in conjunction with a vaccine containing a classical HVT strain or any other HVT recombinant vaccine.**

### ADMINISTRATION

After dilution, administer a single dose of 0,2 ml vaccine per chicken by subcutaneous injection in the neck or one dose of 0,05 ml per egg by *in ovo* injection.

### VACCINATION PROGRAMME

Vaccinate chicks in the hatchery.

### IMMUNITY

**Onset of immunity:**

**ND:** 4 weeks,  
**ILT:** 4 weeks,  
**MD:** 9 days.

### Duration of immunity:

**ND:** 62 weeks,  
**ILT:** 62 weeks,  
**MD:** entire risk period.

### STORAGE

- Ampoules (cell suspension): Store and transport frozen in liquid nitrogen (below  $-140^{\circ}\text{C}$ ).
- Nobilis® Diluent CA: Store below  $25^{\circ}\text{C}$ .
- Container: Store liquid nitrogen container securely in upright position in a clean, dry and well ventilated room separated from the hatching/chicken room in the hatchery.

### WITHDRAWAL PERIOD

Withdrawal period: 21 days after subcutaneous injection.

### PRESENTATION

Glass ampoules containing 2 000 doses of vaccine.  
Nobilis® Diluent CA is available in 200 ml, 400 ml or 800 ml.





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years | EXPERIENCE IN  
VACCINE R&D

# Mycoplasma live vaccines



Mycoplasma  
live vaccines



# NOBILIS® MG 6/85

Reg. No. G2598 (Act 36/1947)

Namibia Reg. No. V05/24.3/191 **NSO**

## INDICATIONS

A live, attenuated vaccine for the immunisation of healthy chickens (breeders & layers) via the spray method or eye drop administration for the protection against clinical signs associated by *Mycoplasma gallisepticum* (Mg) infection.

## COMPOSITION

The vaccine contains the live, attenuated, freeze-dried strain 6/85 of *Mycoplasma gallisepticum*. The content of each vial is lyophilised and vacuum packed.

Each vial contains at least  $10^{1.8}$  CFU<sup>1</sup> per dose of live *Mycoplasma gallisepticum* strain Intervet 6/85 in stabiliser.

1. Colony forming units.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Nobilis® MG 6/85 is recommended for the vaccination of healthy chickens 6 weeks of age or older.

## ADMINISTRATION

- The vaccine is recommended for the vaccination of healthy chickens 6 weeks of age or older via spray or eye drop administration.
- For spray - dissolve the freeze-dried pellet in clean, cool, non-chlorinated water, preferably distilled. Allow it to reach room temperature (20 °C to 25 °C) before use.
- Spray vaccination should be a fine spray of less than 20 microns.
- For eyedrop administration - dissolve the vaccine in solvent (Diluent Oculo-Nasal).

## VACCINATION PROGRAMME

Many factors must be considered in determining a sound vaccination programme for a particular farm or poultry complex. To be fully effective, the vaccine must be administered properly to healthy, receptive chickens maintained in a proper environment under good management. In addition, the response will be influenced by the age of the chickens and their immune status. The level of immunity required will vary with operational practices and the degree of exposure. A programme of periodic revaccination may be necessary.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.
- Do not use after expiry date stated on the label.

## WITHDRAWAL PERIOD

Do not vaccinate within 21 days before slaughter.

## PRESENTATION

Vials containing 1 000 doses or 2 000 doses.



Mycoplasma  
live vaccines

## FVAX-MG<sup>®</sup>

Reg. No. G4295 (Act 36/1947)

### INDICATIONS

FVAX-MG<sup>®</sup> is recommended for use in healthy chickens 9 weeks of age or older by spray administration to aid in prevention of clinical signs associated with *Mycoplasma gallisepticum* infection.

### COMPOSITION

FVAX-MG<sup>®</sup> vaccine is a live vaccine containing the F-strain of *Mycoplasma gallisepticum*  $\geq 10^{6.0}$  CCU<sub>50</sub>\* per dose, in a freeze-dried preparation sealed under vacuum in a stabiliser.

Preservative: Penicillin.

Contains lactose.

\*CCU - Colour Change Units

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

It is advised to vaccinate chickens before the onset on egg production.

### ADMINISTRATION

- Spray administration only.
- Use 100 ml cool, clean non-chlorinated drinking water per 1 000 doses.
- Place vaccine in sprayer container.
- Spray coarse droplets. Droplets of 40 to 50 microns average size are desirable.
- Apply vaccine over all chickens at the rate of 9 doses/m<sup>2</sup> or 1 dose per chicken, whichever is greater.
- Use rehydrated vaccine within 1 hour.

### VACCINATION PROGRAMME

Vaccinate healthy chickens 9 weeks of age or older.

### IMMUNITY

To avoid interference with development of protection, chickens to be vaccinated should not be given any antibiotic and/or sulphonamide medication for 3 days before and 7 days after vaccination.

Do not administer within 3 days before to 7 days after treatment with oxytetracycline or chlortetracycline. FVAX-MG<sup>®</sup> should not be administered within 1 week before or after vaccination with live Newcastle Disease, Infectious Bronchitis or Infectious Laryngotracheitis vaccines.

### STORAGE

- Store between 2 °C and 7 °C.
- Do not freeze.
- Protect from direct sunlight.

### WITHDRAWAL PERIOD

Do not vaccinate within 21 days of slaughter.

### PRESENTATION

Vials containing 1 000 doses.





Mycoplasma  
live vaccines



# VAXSAFE® MS VACCINE

Reg. No. G3497 (Act 36/1947)

## INDICATIONS

An aid in the control of airsacculitis and synovitis in broiler breeder and layer pullets caused by *Mycoplasma synoviae*.

## COMPOSITION

Live attenuated *Mycoplasma synoviae*, strain MS-H Living  $2,4 \times 10^6$  ccu/dose.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

It is advised to vaccinate chickens before the onset on egg production.

## ADMINISTRATION

Individual vaccination via the eye drop method.

## VACCINATION PROGRAMME

Vaccinate pullets between 4 and 14 weeks of age.

## IMMUNITY

Vaccination need only be done once.

Revaccination is neither needed nor recommended.

## STORAGE

- Long term storage, store below  $-70^{\circ}\text{C}$ .
- For short term storage (maximum four weeks), vaccine can be stored in a standard freezer at a temperature not warmer than  $-18^{\circ}\text{C}$ .

## WITHDRAWAL PERIOD

None.

## PRESENTATION

Vaxsafe® MS Vaccine is supplied frozen on dry ice, in a 30 ml plastic peel top eye dropper vial, sufficient for 1 000 doses via eye drop method.



100  
years | EXPERIENCE IN  
VACCINE R&D

# Other live vaccines



Other live  
vaccines

# ENTEROVAX®

Reg. No. G3615 (Act 36/1947)

Namibia Reg. No. V07/24.3/739 **NSO**

## INDICATIONS

For use in healthy chickens as an aid in the control and prevention of Reovirus induced tenosynovitis (viral arthritis).

## COMPOSITION

Contains a modified live Avian Reovirus 1133 TC/C6 strain in a freeze-dried preparation sealed under vacuum and preserved with gentamycin.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

## ADMINISTRATION

Administer via the spray or drinking water method.

Do not administer this product by injection.

Do not administer using an automatic eye drop vaccinator to day-old chicks.

Do not mix Enterovax® with other vaccines.

## VACCINATION PROGRAMME

Spray method: 1 day of age.

Drinking water method: 1 week of age or older.

## STORAGE

- Store between 2 °C and 7 °C.
- Do not freeze.
- Protect from light.

## WITHDRAWAL PERIOD

Do not slaughter chickens for human consumption within 21 days after vaccination.

## PRESENTATION

Vials containing 1 000 doses.





Other live  
vaccines

# LT-IVAX®

Reg. No. G3603 (Act 36 /1947)  
Namibia Reg. No. V03/24.3/742 **NSO**

## INDICATIONS

Modified live virus vaccine for use in chickens 4 weeks of age or older, as an aid in the prevention of Infectious Laryngotracheitis through vaccination by the eye drop method.

## COMPOSITION

LT-IVAX® vaccine contains a live virus of chicken tissue culture origin.  
Each dose contains:  $10^{2.5}$  TCID<sub>50</sub> Infectious Laryngotracheitis virus.  
Preservative: Gentamycin sulphate.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

In outbreak situations, vaccinate healthy chickens first, progressing toward outbreak areas in order to vaccinate diseased chickens last.

## ADMINISTRATION

Vaccinate by the eye drop method.  
Instill 1 full drop of rehydrated vaccine into the open eye of the chicken and hold until a swallowing motion is observed.

## VACCINATION PROGRAMME

Vaccinate according to the following schedule:  
Initial vaccination: 4 weeks of age  
Revaccination: 10 weeks of age or older.

## STORAGE

- Store between 2 °C and 7 °C.

## WITHDRAWAL PERIOD

Do not vaccinate within 21 days before slaughter.

## PRESENTATION

Vials containing 1 000 doses.





Other live  
vaccines

# NOBILIS® ILT

Reg. No. G2450 (Act 36/1947)

Namibia Reg. No. V98/24.3/675 **NSO**

## INDICATIONS

Nobilis® ILT is a live attenuated vaccine for the prevention and emergency vaccination of chickens against Infectious Laryngotracheitis via eye drop administration.

## COMPOSITION

Each dose of Nobilis® ILT contains a freeze-dried chicken embryo propagated culture of a modified strain of Infectious Laryngotracheitis virus.

Each dose contains at least  $2,5 \log_{10}$  EID<sub>50</sub> of live Infectious Laryngotracheitis virus Serva strain with stabilisers.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

## ADMINISTRATION

The vaccine is administered via eye drop administration.

Instill 1 drop into an eye of each chicken. Allow the drop to spread across the surface of the eye. Do not release the chicken until a swallowing motion is noticed.

## VACCINATION PROGRAMME

It is recommended to vaccinate susceptible chickens at the age of 4 to 6 weeks and to revaccinate at 14 to 16 weeks of age.

In emergency cases, the chickens may be vaccinated earlier, but should then always be revaccinated 1 month before the start of the laying period, also by eye drop administration.

## IMMUNITY

The vaccine has been prepared from a special strain, modified to allow eye drop administration from the first vaccination onwards. Vaccination by this method produces early immunity (4 to 5 days post vaccination) which will last for about 1 year if the chickens are vaccinated in accordance with the above vaccination programme.

## STORAGE

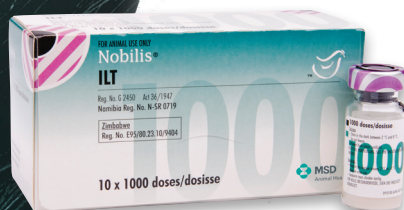
- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures.
- Protect from exposure to direct sunlight.
- Solvent: May be stored at room temperature (20 °C to 25 °C).

## WITHDRAWAL PERIOD

Do not vaccinate within 21 days before slaughter.

## PRESENTATION

Vials containing 1 000 doses or 2 500 doses.





Other live  
vaccines

# NOBILIS® CAV P4

Reg. No. G2467 (Act 36/1947)  
Kenya Reg. No. VMD 2019/20528-II  
Namibia Reg No. V98/24.3/673 **NSO**

## INDICATIONS

A live attenuated freeze-dried vaccine containing chicken anaemia vaccine virus. Nobilis® CAV P4 is intended for the immunisation of healthy future breeding chickens against chicken anaemia.

## COMPOSITION

Each 1 ml dose contains at least 2,3 log<sub>10</sub> TCID<sub>50</sub> of chicken anaemia vaccine virus propagated on embryonated eggs. The freeze-dried pellet contains stabilisers.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

Nobilis® CAV P4 can be administered via intramuscular or subcutaneous injection, or via the wing-web method.

For intramuscular or subcutaneous injection, reconstitute the vaccine with Intervet's diluent Dilavia and administer 0,2 ml per chicken.

### RECOMMENDED VACCINATION PROGRAMME

The optimum time and method of administration depend largely upon the local situation. Therefore, the advice of a veterinarian should be sought. Under no circumstances should the vaccine be administered under 6 weeks of age. To make sure that adequate antibody levels are built up at the onset of lay, breeding chickens have to be vaccinated at least 6 weeks before this onset.

Vaccination against CAV can be combined with vaccination against Reovirus (intramuscular or subcutaneous route) or with vaccination against fowl pox (wing-web route).

### IMMUNITY

The induction of high neutralising antibody levels is generally dependent on the health and condition of the chickens. Hygiene and management are also important in the post-vaccination period. Breeding chickens must be vaccinated at least 6 weeks before the onset of lay.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from direct sunlight.
- The diluent may be stored at room temperature (20 °C to 25 °C) prior to use.

## WITHDRAWAL PERIOD

None.

## PRESENTATION

Vials containing 1 000 doses.





Other live  
vaccines

# NOBILIS® REO 2177

Reg. No. G3113 (Act 36/1947)

## INDICATIONS

Nobilis® REO 2177 is indicated for the active immunisation of chickens to reduce tenosynovitis and associated disease symptoms induced by Reovirus infection. The vaccine can be given as from 1 day of age and is effective in the presence of maternally derived antibodies and is also effective as a primer to inactivated Reovirus vaccines.

## COMPOSITION

Nobilis® REO 2177 is a live non-pathogenic Reovirus strain 2177 containing at least  $3,1 \log_{10}$  TCID<sub>50</sub> per dose in a stabiliser. The vaccine may contain traces of antibiotics as remnants of production.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

Dissolve freeze-dried pellet in diluent for Marek's Disease vaccines.

Inject 0,2 ml per chicken subcutaneously into the lower back part of the neck or intramuscularly into the muscle of the leg. Use a sterile syringe and needle.

### STORAGE

- Store in a fridge between 2 °C and 8 °C.
- Do not freeze.
- Use reconstituted product within 3 hours.
- Protect from light.

### WITHDRAWAL PERIOD

None.

### PRESENTATION

Vials containing 1 000 doses.





Other live  
vaccines

# NOBILIS® SG 9R

Reg. No. G2523 (Act 36/1947)

Namibia Reg. No. V05/24.3/454 **NSO**

## INDICATIONS

A live, freeze-dried vaccine for the active immunisation of healthy layers as an aid in the control of *Salmonella gallinarum* (chicken typhoid).

## COMPOSITION

Nobilis® SG 9R is a live freeze-dried vaccine based on the *Salmonella gallinarum* strain 9R. The freeze-dried pellet contains a stabiliser. Each 0,2 ml dose contains at least  $2 \times 10^9$  CFU of *Salmonella gallinarum* strain 9R.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

Reconstitute the vaccine with Nobilis® Diluent FD.

Each chicken should receive 0,2 ml of the reconstituted vaccine, subcutaneously into the lower part of the back of the neck.

Inject all the chickens in the flock.

The use of antibiotics or other substances with a systemic action should be avoided from 7 days before vaccination until 14 days after vaccination.

### VACCINATION PROGRAMME

Initial vaccination should be carried out at 6 weeks of age.

Revaccination at intervals of 12 weeks is recommended.

It is advisable to vaccinate all the susceptible chickens on the farm at the same time. If this is not feasible, strict separation of the vaccinated and the unvaccinated chickens should be done to prevent the spread of the vaccine organisms to the unvaccinated chickens.

### STORAGE

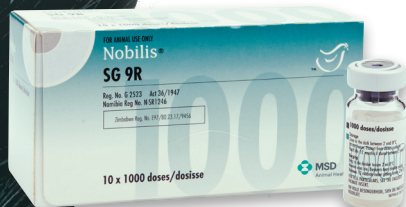
- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.
- Nobilis® Diluent FD: Store at room temperature between 20 °C and 25 °C prior to use.

## WITHDRAWAL PERIOD

None.

## PRESENTATION

Vials containing 1 000 doses each.





Other live  
vaccines



# NOBILIS® RHINO CV

Reg. No. G3278 (Act 36/1947)

## INDICATIONS

For the active immunisation of chickens to reduce infection with Avian Rhinotracheitis virus (Avian Pneumovirus) and to reduce clinical signs and effects of the disease caused by the virus.

## COMPOSITION

Each vial contains at least  $10^{1.5}$  TCID<sub>50</sub> and maximally  $10^{3.7}$  TCID<sub>50</sub> per dose of live attenuated Avian Rhinotracheitis virus (Avian Pneumovirus) strain TRT 11/94.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Each chicken should receive 1 dose of vaccine.

## ADMINISTRATION

The vaccine can be administered to 1-day-old chicks and older chickens by coarse spray or by the oculonasal route of administration.

## VACCINATION PROGRAMME

The optimum time and method of administration depend largely upon the local situation. The advice of a veterinarian should be sought.

The product is not intended for use in hens in lay or breeding hens within 4 weeks before the onset of the laying period.

## STORAGE

- Store at 2 °C to 8 °C.
- Do not freeze.
- Keep the container in the outer carton in order to protect from light.

## WITHDRAWAL PERIOD

None.

## PRESENTATION

Vials containing 1 000, 2 500 and 5 000 doses.



Other live  
vaccines

# TREMVAC-FP

Reg. No. G2448 (Act 36/1947)

## INDICATIONS

A live attenuated vaccine for the immunisation of layer pullets and breeder replacement pullets against Avian Encephalomyelitis (AE) and Fowl Pox.

## COMPOSITION

Each dose of Tremvac-FP vaccine contains at least  $10^{2.5}$  EID<sub>50</sub> Avian Encephalomyelitis virus (AE), strain Calnek 1143 and  $10^{2.8}$  EID<sub>50</sub> Fowl Pox, strain Gibbs. Contains gentamycin as preservative.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

## ADMINISTRATION

Administered by the wing-web method. The vaccine is supplied with diluent and double needle.

## VACCINATION PROGRAMME

The vaccine is recommended for the active immunisation of layer and breeder replacement pullets.

Vaccinate at the age of 8 to 16 weeks.

## IMMUNITY

Vaccinated chickens are protected against decreased egg production due to both diseases during lay and their progeny are protected against AE for the first few weeks of life via maternally transmitted immunity.

Full immunity will develop within 2 to 3 weeks after vaccination.

Vaccination will normally cause no visible reaction.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures.
- Protect from exposure to direct sunlight.
- Diluent: Store at room temperature between 20 °C and 25 °C.

## WITHDRAWAL PERIOD

Do not vaccinate within 21 days of slaughter.

## PRESENTATION

Vial containing 1 000 doses supplied with wing-web needle. Diluent 10 ml (1 000ds).





100  
years | EXPERIENCE IN  
VACCINE R&D

# Monovalent inactivated vaccines



**Monovalent  
inactivated  
vaccines**



# NOBILIS® CORYZA

Reg. No. G2360 (Act 36/1947)  
Namibia Reg. No. V97/24.3/864 **NSO**  
Zambia Reg. No. 331/716V  
Zimbabwe Reg. No. 94/80.23.10/9383

## INDICATIONS

Nobilis® Coryza is a trivalent inactivated vaccine for the protection of chickens from 5 weeks onwards against Infectious Coryza infection cause by *Avibacterium paragallinarum*.

## COMPOSITION

Nobilis® Coryza contains *Avibacterium paragallinarum* serotypes A, B and C. Each 0,5 ml dose of Nobilis® Coryza contains at least  $3 \times 10^8$  bacteria of the serotypes A, B and C of *Avibacterium paragallinarum* inactivated with thiomersal and suspended in the aqueous phase of a water-in-oil emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

Each chicken should be given 0,5 ml of the vaccine subcutaneously into the back of the neck. Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use. Shake well before use and at regular intervals during the vaccination process.

### RECOMMENDED VACCINATION PROGRAMME

Nobilis® Coryza should be given to chickens from 5 weeks of age onwards. To achieve a protection in layers and breeders up to 60 weeks of age, revaccination a few weeks before the onset of egg production is required.

### STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from direct sunlight.

### WITHDRAWAL PERIOD

Do not market chickens for slaughter purposes for at least 6 weeks after vaccination.

## PRESENTATION


Bottles containing 500 ml sufficient for 1 000 doses.



Monovalent  
inactivated  
vaccines



# NOBILIS® CORVAC-4

Reg. No. G3491 (Act 36/1947)  
Namibia Reg. No. V05/24.3/50   
Zambia Reg. No. 331/704V  
Zimbabwe Reg. No. 2012/80.23.17/9677

## INDICATIONS

Nobilis® Corvac-4 is a tetravalent, inactivated whole cell vaccine for the active immunisation of chickens to reduce infection and clinical signs of Infectious Coryza caused by *Avibacterium paragallinarum*.

## COMPOSITION

Each dose of 0,5 ml contains *A. paragallinarum*: strain 083 (serotype A) at least 1 CPD<sub>70</sub>\*, strain Spross (serotype B) at least 1 CPD<sub>70</sub>\*, strain H-18 (serotype C) at least 1 CPD<sub>70</sub>\* and strain 48 (serotype variant type B) at least 1 CPD<sub>70</sub>\*, incorporated in a water-in-oil emulsion.

\* 70 % chicken protective dose

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

- Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) before use.
- Shake well before use and at regular intervals during the vaccination process.

## ADMINISTRATION

Each chicken should be given 0,5 ml of the vaccine, subcutaneously.

## RECOMMENDED VACCINATION PROGRAMME

Nobilis® Corvac-4 can be given to chickens from 3 weeks of age onwards with a revaccination before lay. The interval between the vaccinations should be at least 6 weeks.

## STORAGE

- Store between 2 °C and 8 °C.
- Do not freeze.

## WITHDRAWAL PERIOD

Do not slaughter chickens for human consumption within 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.



**Monovalent  
inactivated  
vaccines**



# NOBILIS® EDS

Reg. No. G2578 (Act 36/1947)  
Zimbabwe Reg. No. 95/80.23.10/9396

## INDICATIONS

Nobilis® EDS is an inactivated vaccine for the protection of layers and breeding chickens against Egg Drop Syndrome '76.

## COMPOSITION

Each dose of 0,5 ml contains the inactivated Egg Drop Syndrome '76 virus (strain BC 14) antigen inducing 6,5 log<sub>2</sub> HI units. The virus has been inactivated with formalin and subsequently suspended in the water phase of a water-in-oil emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

## ADMINISTRATION

Each chicken should be given 0,5 ml of the vaccine intramuscularly into the breast muscle or subcutaneously in the lower part of the neck. (Intramuscular injection into the breast muscle: The needle should be pointed in the direction of the chicken's head to prevent the needle from entering the body cavity).

## RECOMMENDED VACCINATION PROGRAMME

Nobilis® EDS should be given to chickens around 16 to 20 weeks of age, but not less than 4 weeks before the expected onset of lay.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Allow the vaccine to gradually reach room temperature between 20 °C and 25 °C before use.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from direct sunlight.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter for at least 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.



**Monovalent  
inactivated  
vaccines**



# NOBILIS® GUMBORO INAC

Reg. No. G2562 (Act 36/1947)

## INDICATIONS

Nobilis® Gumboro Inac is an inactivated vaccine recommended for the booster vaccination of breeding stock against Infectious Bursal Disease in order to protect the offspring of vaccinated chickens against Gumboro disease.

## COMPOSITION

Each 0,5 ml dose of Nobilis® Gumboro Inac vaccine contains Gumboro virus strain D78 inducing  $\geq 14,5 \log_{10}$  VN units. The virus was grown on Vero Cell cultures, was inactivated with formalin and subsequently suspended in the aqueous phase of an oil adjuvant emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Shake well before use and at regular intervals during the vaccination process.

## ADMINISTRATION

Each chicken should be given 0,5 ml of the vaccine intramuscularly into the thigh or breast muscle or subcutaneously into the back of the neck. (Administration via intramuscular injection into the breast muscle, the needle should be pointed in the direction of the chicken's head to prevent the needle from entering the body cavity). Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use.

Shake well before use and at regular intervals during the vaccination process. Remove the aluminium over seal and the vaccine is ready for use. Inject all the chickens in the flock.

## RECOMMENDED VACCINATION PROGRAMME

Nobilis® Gumboro Inac should be given to chickens around 16 to 20 weeks of age, but not less than 4 weeks before the onset of lay. For an optimal booster effect, the chickens must be primed with a live vaccine against Infectious Bursal Disease.

The best results will be obtained if vaccination with inactivated vaccine takes place 6 or more weeks after administration of the live primer, but under no circumstances should it be done earlier than 4 weeks after priming.

## IMMUNITY

When the priming and subsequent vaccination have been carried out correctly the offspring hatched at any stage of the laying period will, under normal field situations, have sufficient maternal antibodies to protect them against disease caused by Gumboro infections during the first week of life.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter purposes for at least 6 weeks after vaccination.

## PRESENTATION


Bottles containing 500 ml sufficient for 1 000 doses.



**Monovalent  
inactivated  
vaccines**



# NOBILIS® MG INAC

Reg. No. G2695 (Act 36/1947)  
Ethiopia Reg. No. INT/USA/01  
Namibia Reg. No. V05/24.3/58   
Zambia Reg. No. 331/721V  
Zimbabwe Reg. No. 97/80.23.17/9446

## INDICATIONS

Nobilis® MG Inac is an inactivated vaccine for the immunisation of chickens as an aid in the prevention of airsacculitis and egg production losses caused by *Mycoplasma gallisepticum* infection.

## COMPOSITION

Each 0,5 ml dose of Nobilis® MG Inac contains at least 0,23 O.D. units (one chicken effective dose) of *Mycoplasma gallisepticum* cells strain 6/85, inactivated by thimerosal and suspended in the aqueous phase of a water-in-oil emulsion in order to enhance the stimulation of immunity.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use. Remove the aluminium overseal and the vaccine is ready for use. Shake the bottle prior to and at regular intervals during the vaccination process.

Inject 0,5 ml per chicken subcutaneously into the lower part of the back of the neck. Inject all the chickens in the flock. Use a sterilised syringe and needle.

## RECOMMENDED VACCINATION PROGRAMME

Chickens may be vaccinated from 3 weeks old and older.  
Do not vaccinate within 14 days before the onset of lay or during lay.

## STORAGE

- Store in the dark between 2 °C and 8 °C. Do not freeze.
- Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) before use.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter for at least 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.



**Monovalent  
inactivated  
vaccines**



# NOBILIS® ND BROILER

Reg. No. G2469 (Act 36/1947)

Namibia Reg. No. V98/24.3/676 **NSO**

## INDICATIONS

Nobilis® ND Broiler is an inactivated vaccine intended for the active immunisation of 1-day-old broiler chicks against Newcastle Disease.

## COMPOSITION

Each 0,1 ml dose of Nobilis® ND Broiler contains  $\geq 20$  PD<sub>50</sub> units of inactivated Newcastle Disease virus (the Newcastle Disease virus antigen induces  $\geq 4$  log<sub>2</sub> HI units per 1/50 dose). The virus is inactivated with formalin and suspended in the aqueous phase of a water-in-oil emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Shake well before use and at regular intervals during the vaccination process.

## ADMINISTRATION

Inject 0,1 ml per broiler chicken intramuscularly into the thigh, or subcutaneously into the back of the neck. Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use.

Remove the aluminium overseal and the vaccine is ready for use.

Inject all the chickens in the flock.

## RECOMMENDED VACCINATION PROGRAMME

Nobilis® ND Broiler is administered by injection to 1-day-old chickens, in combination with a live Newcastle Disease vaccine (e.g. Nobilis® ND Clone 30 G2466), administered according to the manufacturer's instructions. The chickens vaccinated in this way will be protected against Newcastle Disease for up to 8 to 9 weeks of age.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from direct sunlight.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter purposes for at least 6 weeks.

## PRESENTATION

Bottles containing 500 ml sufficient for 5 000 doses.



**Monovalent  
inactivated  
vaccines**



# NOBILIS® NEWCAVAC

Reg. No. G2757 (Act 36/1947)  
Kenya Reg. No. VMD 2019/20526-II  
Namibia Reg. No. V05/23.3/456 **INSO**

## INDICATIONS

Nobilis® Newcavac is an inactivated vaccine recommended for the booster vaccination of primed layers and breeding chickens for protection against Newcastle Disease.

## COMPOSITION

Nobilis® Newcavac contains Newcastle Disease virus Clone 30 inactivated with formalin in a water-in-oil emulsion. Each 0,5 ml dose of Nobilis® Newcavac contains  $\geq 50$  PD<sub>50</sub> units of the inactivated Newcastle Disease virus Clone 30. The virus is inactivated with formalin and suspended in the aqueous phase of a water-in-oil emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Allow vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use. Shake the bottle well and at regular intervals during use. Remove the aluminium seal and the vaccine is ready for use. Inject all the chickens in the flock.

## ADMINISTRATION

Each chicken should be given 0,5 ml of Nobilis® Newcavac intramuscularly in the breast muscle or subcutaneously in the lower part of the neck. (Intramuscular injection into the breast muscle: The needle should be pointed in the direction of the chicken's head to prevent the needle from entering the body cavity).

## RECOMMENDED VACCINATION PROGRAMME

Primed chickens should be vaccinated with Nobilis® Newcavac around 16 to 20 weeks, but not less than 4 weeks before the expected onset of lay. For an optimal booster effect, the chickens must be primed with live vaccine against Newcastle Disease. The best results are obtained if the vaccination with the inactivated vaccine takes place 6 or more weeks after the administration of the live primer but under no circumstances should it be done earlier than 4 weeks after priming.

## IMMUNITY

When priming and subsequent vaccination have been carried out correctly, the chickens will develop antibodies at a level which provides protection against Newcastle Disease.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter purposes for at least 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml, sufficient for 1 000 doses.



**Monovalent  
inactivated  
vaccines**



# NOBILIS® REO INAC

Reg. No. G2577 (Act 36/1947)  
Namibia Reg. No. V05/24.3/187 **NSO**  
Zimbabwe Reg. No. 96/80.23.17/9436

## INDICATIONS

Nobilis® Reo Inac is an inactivated vaccine recommended for the booster vaccination of primed breeding stock against Avian Reovirus in order to protect the offspring of the vaccinated chickens against Reovirus infections.

## COMPOSITION

Nobilis® Reo Inac is an inactivated vaccine containing 2 immunogenic strains of Reovirus. Each dose of Nobilis® Reo Inac contains Reovirus strains 1733 and 2408 inducing > 7,4 log<sub>2</sub> ELISA units. The viruses have been grown on CEF cell cultures and are inactivated with formalin and subsequently suspended in the aqueous phase of an oil adjuvant emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Shake the bottle well before use.

## ADMINISTRATION

Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use. Remove the aluminium overseal and the vaccine is ready for use. Shake the bottle well prior to and at regular intervals during the vaccination process. Inject 0,5 ml per chicken subcutaneously into the lower part of the neck or intramuscularly into the thigh or breast muscle.

The needle should be pointed in the direction of the chicken's head to prevent the needle from entering the body cavity. Inject all the chickens in the flock. Use a sterile syringe and needle.

## RECOMMENDED VACCINATION PROGRAMME

Nobilis® Reo Inac should be given to chickens around 16 to 20 weeks of age, but not within 4 weeks prior to the onset of lay. For an optimal booster effect, the chickens must be primed with the live vaccine against Avian Reovirus.

The best results will be obtained if vaccination with inactivated vaccine takes place 6 or more weeks after administration of the live primer but in no circumstances should it be done earlier than 4 weeks after priming.

## IMMUNITY

When priming and subsequent vaccination have been carried out correctly the offspring born at any stage of the laying period up to 50 weeks of age will, under normal field situations, have sufficient maternal antibodies to protect them against disease caused by Reovirus infections during the first weeks of life.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Allow the vaccine to reach room temperature (15 °C to 25 °C) gradually before use.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from direct sunlight.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter purposes for at least 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.



**Monovalent  
inactivated  
vaccines**



# NOBILIS® RT INAC

Reg. No. G2850 (Act 36/1947)

## INDICATIONS

Nobilis® RT Inac is indicated for the active immunisation of primed future breeder and layer chickens to prevent mortality and clinical signs induced by infection with Avian Rhinotracheitis virus.

## COMPOSITION

Contains inactivated Avian Rhinotracheitis virus, strain BUT 1#8544, inducing at least 10 log<sub>2</sub> ELISA units. This is a water-in-oil emulsion vaccine.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

- Shake well before use and at regular intervals during the vaccination process.
- Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) before use.
- Avoid prolonged, repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.

## ADMINISTRATION

One dose of 0,5 ml per chicken by intramuscular injection in the thigh muscle.

## RECOMMENDED VACCINATION PROGRAMME

A single dose should be administered at approximately 14 to 20 weeks, but not later than 4 weeks before the expected onset of lay.

In the event that live vaccines were used to prime chickens against Avian Rhinotracheitis, Nobilis® RT Inac should be given at least 4 weeks after the administration of the live vaccine.

## IMMUNITY

The duration of immunity is throughout one laying period. A serological immune response can be measured after 3 weeks.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Protect from direct sunlight.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter purposes for at least 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.




**Monovalent  
inactivated  
vaccines**



# NOBILIS® SALENVAC T

Reg. No. G3558 (Act 36/1947)

Namibia Reg. No. V05/24.3/49 

Zambia Reg. No. 331/726V

## INDICATIONS

Nobilis® Salenvac T is indicated for the active immunisation of future breeder and layer chickens as an aid to reduce faecal excretion and infection by *Salmonella enteritidis* and *Salmonella typhimurium*.

## COMPOSITION

### Active Constituents

Formalin killed cells of *Salmonella enteritidis* PT 4  
Formalin killed cells of *Salmonella typhimurium* DT104

### per dose (0,5 ml)

≥ 1 RP\*

≥ 1 RP\*

\* RP = relative potency = mean antibody response in rabbit potency test equal to or greater than a reference batch which was shown to be efficacious in chickens.

### Excipients

Aluminium hydroxide gel.

Preservative: Thiomersal 0,065 mg per 0,5 ml.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

The vaccine bottle must be shaken before use.

## ADMINISTRATION

- Inject all the chickens in the flock.
- Inject 0,5 ml in chickens 4 weeks of age or older.
- Administration is by intramuscular injection into the thigh muscle.
- Observe aseptic precautions.

## RECOMMENDED VACCINATION PROGRAMME

- Two vaccinations, 4 weeks apart should be given.
- The first vaccination can be given from 6 weeks of age, and the second vaccination not later than 16 weeks of age.
- Once opened, use of the vaccine must be completed within 10 hours.

## IMMUNITY

### Active immunity

Vaccination will provide the above protection from *Salmonella enteritidis* and *Salmonella typhimurium* from 4 weeks.

After the second administration immunity will last until approximately 57 to 60 weeks of age. Protection has been demonstrated against other *Salmonellas* of the serogroup B namely *S. Agona* and *S. Heidelberg*.

### Passive immunity

Onset of immunity: day 1 after hatching.

Duration of immunity: until at least 14 days after hatching.

Passive immunity is transferred from at least 4 weeks after the second vaccination up to at least 59 weeks of age of the parent bird.

## STORAGE

- Store between 2 °C and 8 °C.
- Do not freeze.
- Protect from light.
- Once opened the vaccine must be used within 10 hours.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter purposes until at least 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000.



100  
years | EXPERIENCE IN  
VACCINE R&D

# Multivalent inactivated vaccines



## Multivalent inactivated vaccines



# NOBILIS® G+ND

Reg. No. G2707 (Act 36/1947)

Namibia Reg. No. V05/24.3/658 **NSO**

Ethiopia Reg. No. INT/NET/003

### INDICATIONS

Nobilis® G+ND is a combined inactivated vaccine for primed chickens and is recommended for the protection of the progeny of breeders against Infectious Bursal Disease (Gumboro) during the first weeks of their life and for the booster vaccination of future breeders and layers against Newcastle Disease.

### COMPOSITION

Each 0,5 mℓ dose of Nobilis® G+ND contains Infectious Bursal Disease (Gumboro) inducing  $\geq 14,5 \log_{10}$  VN units and Newcastle Disease virus Clone 30  $\geq 50 \text{ PD}_{50}$ . The viruses were grown in embryonated eggs or Vero Cell cultures and were inactivated with formalin and subsequently suspended in the aqueous phase of an oil adjuvant emulsion.

### DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Shake well before use and at regular intervals during the vaccination process.

### ADMINISTRATION

- Each chicken should be given 0,5 mℓ of the vaccine intramuscularly into the thigh or breast muscle or subcutaneously into the back of the neck. (Administration via intramuscular injection into the breast muscle, the needle should be pointed in the direction of the chicken's head, to prevent the needle from entering the body cavity.)
- Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use.
- Shake well before use and at regular intervals during the vaccination process.
- Remove the aluminium overseal and the vaccine is ready for use.
- Inject all the chickens in the flock.

### RECOMMENDED VACCINATION PROGRAMME

- Nobilis® G+ND should be given to chickens around 16 to 20 weeks of age, but not less than 4 weeks before the onset of lay.
- For an optimal booster effect, the chickens must be primed with a live vaccine against Newcastle Disease and Infectious Bursal Disease.

- The best results will be obtained if vaccination with inactivated vaccine takes place 6 or more weeks after administration of the live primer, but under no circumstances should it be done earlier than 4 weeks after priming.

### IMMUNITY

If priming and subsequent vaccination have been carried out correctly the chickens will develop antibodies at a level which provides protection against Newcastle Disease.

Under normal field situations, the offspring hatched at any stage of the laying period will have sufficient maternal antibodies to protect them against Infectious Bursal Disease (Gumboro) infections during the first week of life.

### STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.

### WITHDRAWAL PERIOD

Do not market chickens for slaughter purposes for at least 6 weeks after vaccination.

### PRESENTATION

Bottles containing 500 mℓ sufficient for 1 000 doses.



Multivalent  
inactivated  
vaccines



# NOBILIS® IB+ND+EDS

Reg. No. G2613 (Act 36/1947)  
Nigeria Reg. No. 04-3250  
Zambia Reg. No. 331/707V  
Zimbabwe Reg. No. 2017/80.23.17/9755

## INDICATIONS

Nobilis® IB+ND+EDS is a combined inactivated vaccine for the protection of layers and breeders against Egg Drop Syndrome '76 and for the booster vaccination of breeding chickens against Newcastle Disease and Massachusetts type of Infectious Bronchitis.

## COMPOSITION

Nobilis® IB+ND+EDS contains immunogenic strains of Infectious Bronchitis virus (Massachusetts), and Newcastle Disease virus and the BC strain 14 of Egg Drop Syndrome '76 virus.

Each 0,5 ml dose of Nobilis® IB+ND+EDS contains immunogenic strains of Infectious Bronchitis virus (Massachusetts) (inducing  $\geq 6,0 \log_2$  HI units), Newcastle Disease virus, (containing  $\geq$  to 50  $PD_{50}$  units), and BC strain 14 of Egg Drop Syndrome '76 virus (inducing  $\geq 6,5 \log_2$  HI units). The viruses have been inactivated with formalin and subsequently suspended in the water phase of a water-in-oil emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Shake well before use and at regular intervals during the vaccination process.

## ADMINISTRATION

- Each chicken should be given 0,5 ml of the vaccine intramuscularly into the breast muscle or subcutaneously into the back of the neck. (Intramuscular into the breast muscle, the needle should be pointed in the direction of the chicken's head to prevent the needle from entering the body cavity).
- Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use.
- Shake well before use and at regular intervals during the vaccination process.
- Remove the aluminium over seal and the vaccine is ready for use.
- Inject all the chickens in the flock.

## RECOMMENDED VACCINATION PROGRAMME

Nobilis® IB+ND+EDS should be given to chickens around 16 to 20 weeks of age, but not less than 4 weeks before the expected onset of lay. For an optimal booster effect, the chickens must be primed with live vaccines of the separate component strains.

The best results will be obtained if vaccination with inactivated IB vaccine takes place 6 weeks or more after administering the live vaccine but under no circumstances should it be done earlier than 4 weeks after priming.

## IMMUNITY

If priming and subsequent vaccination have been carried out correctly the chickens will develop antibodies at a level which provides protection against Egg Drop Syndrome '76, Newcastle Disease and production losses caused by the Massachusetts serotype of Infectious Bronchitis.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from direct sunlight.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter for at least 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000.



Multivalent  
inactivated  
vaccines



# NOBILIS® IB MULTI+ND

Reg. No. G4436 (Act 36/1947)

## INDICATIONS

A combined inactivated vaccine for the protection of chickens against avian Infectious Bronchitis (IB) (Massachusetts, D207/274 serotypes) and Newcastle Disease (ND).

## COMPOSITION

Nobilis® IB Multi+ND contains 2 immunogenic strains of Infectious Bronchitis virus, (Massachusetts serotype and a variant strain belonging to the D207/ D274 serotype) and 1 immunogenic strain of Newcastle Disease virus. The viruses have been grown on embryonated eggs and are inactivated with formalin. Subsequently they have been suspended in the aqueous phase of a water-in-oil emulsion.

### Each dose contains:

IB virus strain M41	inducing $\geq 5,5 \log_2$ VN units
IB virus strain D274	inducing $\geq 4,0 \log_2$ VN units
ND virus Clone 30	containing $\geq 50 \text{ PD}_{50}$ units

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

Each chicken should be given 0,5 ml of the vaccine intramuscularly into the thigh or breast muscle or subcutaneously into the lower part of the neck. (Intramuscular injection into the breast muscle: The needle should be pointed in the direction of the chicken's head to prevent the needle from entering the body cavity).

Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use. Shake well before use and at regular intervals during the vaccination process. Inject all the chickens in the flock.

## RECOMMENDED VACCINATION PROGRAMME

Nobilis® IB Multi+ND should be given to chickens around 16 to 20 weeks of age, but not less than 4 weeks before the expected onset of lay. For an optimal booster effect, the chickens must be primed with live vaccines against Infectious Bronchitis and Newcastle Disease.

The best results will be obtained if vaccination with inactivated vaccine takes place 6 or more weeks after administration of the live primer but in no circumstances should it be done earlier than 4 weeks after priming.

## IMMUNITY

If priming and subsequent vaccination have been carried out correctly, the chickens will develop antibodies at a level which provides protection against Newcastle Disease and production losses caused by the serotypes of Infectious Bronchitis covered by the vaccine strains.

## STORAGE

- Store in a refrigerator between 2 °C and 8 °C.
- Do not freeze.
- Do not expose to direct sunlight.
- Once broached, use within 3 hours.

## WITHDRAWAL PERIOD

Do not vaccinate within 21 days before slaughter.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.



Multivalent  
inactivated  
vaccines



# NOBILIS® IB MULTI+ND+EDS

Reg. No. G4323 (Act 36/1947)

## INDICATIONS

Nobilis® IB Multi+ND+EDS is indicated for the vaccination of breeder and layer stocks for protection against the Massachusetts and D207/D274 serotypes of Infectious Bronchitis virus, Newcastle Disease virus and Egg Drop Syndrome virus.

## COMPOSITION

Each dose of 0,5 ml contains:

Inactivated IBV M41	inducing $\geq 4,0 \log_2$ VN units
Inactivated IBV 249G	inducing $\geq 4,0 \log_2$ VN units
Inactivated EDSV	inducing $\geq 6,5 \log_2$ HI units
Inactivated NDV	inducing $\geq 4,0 \log_2$ HI units per 1/50th of a dose
Adjuvant: Light liquid paraffin	(215 mg/dose).

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

- Allow vaccine to gradually reach ambient temperature (between 15 °C and 25 °C) before use.
- Shake the bottle vigorously before use and periodically during use.
- Use the contents of the opened bottle within 3 hours.
- Do not store partially used vaccine for future use.

## DOSAGE AND ADMINISTRATION

- The vaccine should be given to chickens around 14 to 20 weeks of age but not later than 4 weeks before the expected onset of lay.
- For an optimal booster effect, the chickens must be primed with live vaccines against Infectious Bronchitis and Newcastle Disease. No priming is necessary with live vaccines against Egg Drop Syndrome.
- The best result will be obtained if vaccination with inactivated vaccine takes place at least 4 weeks after administration of the live primer.
- Each chicken should be given 0,5 ml of vaccine.
- The vaccine should be given intramuscularly in the thigh or breast muscle, or subcutaneously into the lower part of the neck.

## STORAGE

- Store between 2 °C and 8 °C.
- Do not freeze.
- Protect from light.
- Allow vaccine to gradually reach ambient temperature (between 15 °C and 25 °C) before use.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Do not store partially used vaccine for future use.

## WITHDRAWAL PERIOD

Do not vaccinate within 21 days before slaughter.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.



Multivalent  
inactivated  
vaccines



# NOBILIS® IB+G+ND

Reg. No. G2696 (Act 36/1947)

Namibia Reg. No. V05/24.3/460 **NSO**

## INDICATIONS

Nobilis® IB+G+ND is a combined inactivated vaccine for primed chickens and is recommended for the protection of the progeny of primed breeders during the first week of life against Infectious Bursal Disease (Gumboro), and for the booster vaccination of future layers and breeders against Infectious Bronchitis and Newcastle Disease.

## COMPOSITION

Each dose of Nobilis® IB+G+ND contains inactivated Infectious Bronchitis virus Massachusetts serotype strain M41 inducing  $\geq 6,0 \log_2$  HI units, inactivated Newcastle Disease virus Clone 30  $\geq 50 \text{ PD}_{50}$  units and inactivated Infectious Bursal Disease (Gumboro) inducing  $\geq 14,5 \log_2$  VN units. The viruses were grown in embryonated eggs or Vero Cell cultures, inactivated with formalin, and subsequently suspended in the aqueous phase of an oil adjuvant emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Shake well before use and at regular intervals during the vaccination process.

## ADMINISTRATION

- Each chicken should be given 0,5 ml of the vaccine intramuscularly into the thigh or breast muscle or subcutaneously into the back of the neck (Intramuscular injection into the breast muscle, the needle should be pointed in the direction of the chicken's head, to prevent the needle from entering the body cavity).
- Allow the vaccine to gradually reach room temperature ( $20^\circ\text{C}$  to  $25^\circ\text{C}$ ) prior to use.
- Shake well before use and at regular intervals during the vaccination process.
- Remove the aluminium over seal and the vaccine is ready for use.
- Inject all the chickens in the flock.

## RECOMMENDED VACCINATION PROGRAMME

- Nobilis® IB+G+ND should be given to chickens around 16 to 20 weeks of age, but not less than 4 weeks before the onset of lay.
- For an optimal booster effect, the chickens must be primed with a live vaccine against Infectious Bronchitis, Newcastle Disease and Infectious Bursal Disease.
- The best results will be obtained if vaccination with inactivated vaccine takes place 6 or more weeks after administration of the live primer, but under no circumstances should it be done earlier than 4 weeks after priming.

## IMMUNITY

- If priming and subsequent vaccination have been carried out correctly the chickens will develop antibodies at a level which provides protection against Newcastle Disease and production losses caused by the Massachusetts serotype of Infectious Bronchitis.
- Under normal field situations, the offspring hatched at any stage of the laying period will have sufficient maternal antibodies to protect them against Infectious Bursal Disease (Gumboro) during the first week of life.

## STORAGE

- Store in the dark between  $2^\circ\text{C}$  and  $8^\circ\text{C}$ .
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.

## WITHDRAWAL PERIOD

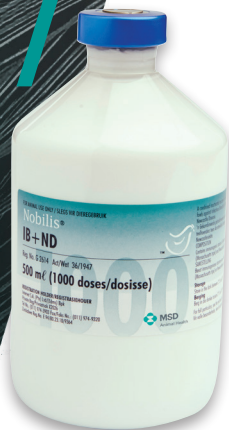
Do not market chickens for slaughter for at least 6 weeks after vaccination.

## PRESENTATION


Bottles containing 500 ml sufficient for 1 000 doses.



Multivalent  
inactivated  
vaccines



# NOBILIS® IB+ND

Reg. No. G2614 (Act 36/1947)  
Namibia Reg. No. V05/24.3/59   
Zambia Reg. No. 331/720V

## INDICATIONS

Nobilis® IB+ND is a combined inactivated vaccine for the protection of future breeding chickens against Infectious Bronchitis (Massachusetts type) and Newcastle Disease.

## COMPOSITION

Nobilis® IB+ND contains immunogenic strains of Infectious Bronchitis virus, (Massachusetts type) and Newcastle Disease virus.

Each 0,5 ml dose of Nobilis® IB+ND contains immunogenic strains of Infectious Bronchitis virus (Massachusetts type), inducing  $\geq 6,0 \log_2$  HI units and Newcastle Disease virus, containing at least  $\geq 50 \text{ PD}_{50}$  units. The viruses have been inactivated with formalin and subsequently suspended in the aqueous phase of an oil adjuvant emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Shake well before use and at regular intervals during the vaccination process.

## ADMINISTRATION

- Each chicken should be given 0,5 ml of the vaccine intramuscularly in the breast muscle or subcutaneously in the back of the neck. (Administration via intramuscular injection into the breast muscle, the needle should be pointed in the direction of the chicken's head, to prevent the needle from entering the body cavity).
- Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use.
- Shake well before use and at regular intervals during the vaccination process.
- Remove the aluminium over seal and the vaccine is ready for use.
- Inject all the chickens in the flock.

## RECOMMENDED VACCINATION PROGRAMME

Nobilis® IB+ND should be given to chickens around 16 to 20 weeks of age, but not less than 4 weeks before the expected onset of lay.

For an optimal booster effect, the chickens must be primed with live vaccines of the separate component strains.

The best results will be obtained if vaccination with inactivated IB vaccine takes place 6 weeks or more after administering the live vaccine but under no circumstances should it be done earlier than 4 weeks after priming.

## IMMUNITY

If priming and subsequent vaccination have been carried out correctly the chickens will develop antibodies at a level which provides protection against Newcastle Disease and production losses caused by serotype Massachusetts of Infectious Bronchitis.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Allow the vaccine to gradually reach room temperature (20 °C to 25 °C) prior to use.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.

## WITHDRAWAL PERIOD

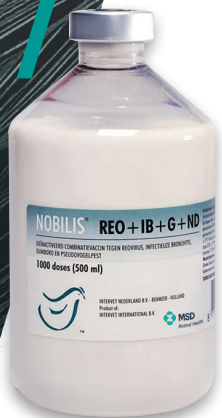
Do not market chickens for slaughter purposes for at least 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.




Multivalent  
inactivated  
vaccines



# NOBILIS® REO+IB+G+ND

Reg. No. G2564 (Act 36/1947)

Namibia Reg. No. V05/24.3/47 

Zambia Reg. No. 331/710V

Zimbabwe Reg. No. 96/80.23.17/9437

## INDICATIONS

Nobilis® Reo+IB+G+ND is a combined inactivated vaccine for chickens and is recommended for the booster vaccination of breeding stock for protection against Infectious Bronchitis and Newcastle Disease and for the immunisation against Reovirus Infection and Infectious Bursal Disease virus so as to protect the offspring against Reovirus Infections and Gumboro Disease by maternal antibodies for at least the first week of life.

## COMPOSITION

Each dose of Nobilis® Reo+IB+G+ND contains inactivated Infectious Bronchitis virus Massachusetts serotype strain 41 inducing  $\geq 6,0 \log_2$  HI units, Newcastle Disease virus Clone 30  $\geq 50 \text{ PD}_{50}$  units, Gumboro virus strain D78 inducing  $\geq 14,5 \log_2$  VN units and Reovirus strains 1733 and 2408 inducing  $\geq 5,0 \log_2$  VN units. The viruses were grown in embryonated eggs or on CEF or Vero Cell cultures, inactivated with formalin and subsequently suspended in the aqueous phase of an oil adjuvant emulsion.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Shake well before use and at regular intervals during the vaccination process.

## DOSAGE AND ADMINISTRATION

- Each chicken should be given 0,5 ml of the vaccine intramuscularly into the thigh or breast muscle or subcutaneously into the lower part of the neck. (Administration via intramuscular injection into the breast muscle, the needle should be pointed in the direction of the chicken's head, to prevent the needle from entering the body cavity.)
- Shake well before use and at regular intervals during the vaccination process.
- Remove the aluminium over seal and the vaccine is ready for use.
- Inject all the chickens in the flock.

## RECOMMENDED VACCINATION PROGRAMME

Nobilis® Reo+IB+G+ND should be given to chickens around 16 to 20 weeks of age, but not less than 4 weeks before the expected onset of lay. For an optimal booster effect, the chickens must be primed with a live vaccine against Infectious Bronchitis, Newcastle Disease, Avian Reovirus infection and Infectious Bursal Disease.

The best results will be obtained if vaccination with inactivated vaccine takes place 6 or more weeks after administration of the live primer, but under no circumstances should it be done earlier than 4 weeks after priming.

## IMMUNITY

If priming and subsequent vaccination have been carried out correctly, the chickens will develop antibodies at a level which provides protection against Newcastle Disease and production losses caused by the Massachusetts serotype of Infectious Bronchitis.

Under normal field situations, the offspring hatched at any stage of the laying period will have sufficient maternal antibodies to protect them against disease caused by Gumboro infections and Reovirus infections during the first weeks of life.

## STORAGE

- Store in the dark between 2 °C and 8 °C.
- Do not freeze.
- Avoid prolonged or repetitive exposure to high ambient temperatures following withdrawal from the refrigerator prior to use.
- Protect from exposure to direct sunlight.

## WITHDRAWAL PERIOD

Do not market chickens for slaughter purposes for at least 6 weeks after vaccination.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.



Multivalent  
inactivated  
vaccines



# NOBILIS® RT+IB MULTI+G+ND

Reg. No. G4428 (Act 36/1947)

## INDICATIONS

Active immunisation of future breeder and layer chickens for:

- Reduction of infection and prevention of egg drop caused by the Massachusetts M41 serotype of Infectious Bronchitis virus;
- and serotype 249G (D274/D207) of Infectious Bronchitis virus (IBV);
- reduction of infection caused by Newcastle Disease virus (NDV);
- prevention of respiratory signs and reduction of egg drop, and eggshell defects related to Avian Rhinotracheitis virus (ART);
- passive immunisation of the progeny of the vaccinated birds against Infectious Bursal Disease (IBDV) for at least the first 4 weeks of life.

## COMPOSITION

Each 0,5 ml dose contains:

Inactivated ART strain BUT 1#8544: inducing  $\geq 9,5 \log_2$  ELISA units\*

Inactivated IBV strain M41 (Massachusetts): inducing  $\geq 5,5 \log_2$  VN units\*

Inactivated IBV strain 249G (D274/D207): inducing  $\geq 4,0 \log_2$  VN units\*

Inactivated IBDV strain D78: inducing  $\geq 14,5 \log_2$  VN units\*

Inactivated NDV strain Clone 30: inducing  $\geq 4,0 \log_2$  HI units per 1/50th dose\* or containing  $\geq 50 \text{ PD}_{50}$  units.

\* Serological response in chickens

Adjuvant: Light liquid paraffin.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

Shake well before use and at regular intervals during the vaccination process.

## ADMINISTRATION

- Administer 1 dose of 0,5 ml vaccine per chicken via intramuscular injection in the thigh or breast muscle.
- Allow vaccine to reach ambient temperature, between 15 °C and 25 °C before use.
- Shake the bottle vigorously before use and periodically during use.

## RECOMMENDED VACCINATION PROGRAMME

- Nobilis® RT+IB Multi+G+ND should be given to chickens around 14 to 20 weeks of age but not later than 4 weeks before the expected onset of lay.
- In the event that live vaccines were used to prime chickens against Infectious Bronchitis, Rhinotracheitis, Newcastle Disease and Infectious Bursal Disease, Nobilis® RT+IB Multi+G+ND should be given at least 4 weeks after the administration of the live vaccines.

## IMMUNITY

For Infectious Bronchitis, Newcastle Disease and Avian Rhinotracheitis virus:

Onset of immunity: 4 weeks after vaccination.

Duration of immunity: 1 laying period.

## STORAGE

- Store in the original package between 2 °C and 8 °C.
- Do not freeze.
- Protect from light.
- Do not use after the expiry date which is stated on the label.
- Once broached, use within 3 hours.

## WITHDRAWAL PERIOD

Do not vaccinate within 21 days before slaughter.

## PRESENTATION

Bottles containing 500 ml sufficient for 1 000 doses.



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# Pharmaceuticals



Pharmaceuticals



# EXZOLT® 10 mg/ml ORAL SOLUTION

Reg. No. G4363 (Act 36/1947)  
Ghana Reg. No. FDA-GH-70922127  
Zimbabwe Reg. No. 2019/80.16.00/9778

## INDICATIONS

For the treatment and control of poultry red mite (*Dermanyssus gallinae*) and Northern fowl mite (*Ornithonyssus sylviarum*) infestation in pullets, breeders and layers.

## COMPOSITION

Each 1 ml contains 10 mg fluralaner.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

## PHARMACOLOGICAL ACTION

### Pharmacodynamic Properties

Fluralaner is an acaricide and an insecticide. It is efficacious against poultry mites, including *Dermanyssus gallinae* (poultry red mite) and *Ornithonyssus sylviarum* (Northern fowl mite). Fluralaner has a high potency against mites, mostly by exposure via feeding, i.e. it is systemically active on target parasites.

Fluralaner is a potent inhibitor of parts of the arthropod nervous system by acting antagonistically on ligand-gated chloride channels (GABA-receptor and glutamate receptor). In molecular on-target studies on insect GABA receptors of fleas and flies, fluralaner is not affected by dieldrin resistance.

## ADMINISTRATION

### For use in drinking water

The dose is 0,5 mg fluralaner/kg body weight (equivalent to 0,05 ml Exzolt® 10 mg/ml Oral Solution) administered twice, 7 days apart. The full course of therapy must be administered for full therapeutic effect.

Determine the time period (in hours) to administer the treatment on the treatment day. This period must allow all chickens to receive the required dose. Estimate how much water chickens will consume during treatment based on their water consumption during the same period the day before commencing treatment.

Calculate the volume of Exzolt® 10 mg/ml Oral Solution needed based on the total weight of the group of chickens to be treated. To ensure administration of the correct dose, body weight should be determined as accurately as

possible and a sufficiently accurate measuring device should be used. The required amount of product on each treatment day is calculated from the total body weight (kg) of the entire group of chickens to be treated:

**ml product/treatment day = Total estimated body weight (kg) of chickens to be treated x 0,05 ml**

One litre of Exzolt® 10 mg/ml Oral Solution treats 10 000 kg body weight (i.e. 5 000 chickens of 2 kg body weight each).

## STORAGE

Store at or below 30 °C in a cool, dry place in the tightly closed, original container.

## WITHDRAWAL PERIOD

Meat and offal – 12 days.

Eggs – zero days.

## PRESENTATION

Pack sizes of 1 l or 4 l.



Pharmaceuticals



# OXITRIL

Reg. No. G4291 (Act 36/1947)

## INDICATIONS

Oxitril is used for the treatment of coccidiosis in chickens and turkeys, caused by infection with various species of *Eimeria*. Oxitril is effective against all intestinal stages of susceptible coccidia. To assist in the development of natural immunity to coccidiosis in breeder and layer replacer stock exposed to continuous challenge of virulent strains of coccidia.

## COMPOSITION

Each 1 ml contains toltrazuril 25 mg.

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

### ADMINISTRATION

- Oxitril is indicated in water medication at the rate of 25 ppm (1 ml Oxitril per 1 000 ml of drinking water). This should be for a continuous period of 48 hours. Alternatively, it can be added at the higher level of 75 ppm (3 ml/1 000 ml) for 8 hours per day on 2 successive days.
- Two days' treatment is sufficient for the therapy of an outbreak of clinical coccidiosis, or control of subclinical coccidiosis during the feeding of ionophores.
- During treatment all water available to the flock must be medicated. Treatment may be by direct application into the header tanks or using an accurate water proportioning system.
- Before use, header tanks should be emptied, thoroughly cleaned and then filled with a known volume of clean water before adding the required amount of Oxitril. The resulting mixture should be stirred. Header tanks should be inspected at regular intervals for the presence of dust, algae formation and sedimentation.

## STORAGE

- Store at or below 25 °C.
- Do not freeze.
- In-use storage of diluted oral solution is 48 hours.

## WITHDRAWAL PERIOD

Do not slaughter chickens within 14 days and turkeys within 16 days after treatment, for human consumption. Do not use in birds producing eggs for human consumption.

## PRESENTATION

Pack sizes of 1 l and 2,5 l.



Pharmaceuticals

# PANACUR® AQUASOL

Reg. No. G4316 (Act 36/1947)  
Zimbabwe Reg. No. 2017/80.12.10/9768

## INDICATIONS

For the treatment and control of gastrointestinal nematodes in chickens infected with *Ascaridia galli* and *Heterakis gallinarum* (pre-adult and adult stages). Panacur® AquaSol has an ovicidal effect on nematode eggs.

## COMPOSITION

**Contains:** Fenbendazole 200 mg/ml

**Preservative:** Benzyl alcohol 20 mg/ml

\*benzimidazole

## DIRECTIONS FOR USE - USE ONLY AS DIRECTED

- Shake well before use.
- For use in drinking water.
- To ensure administration of a correct dose, body weight should be determined as accurately as possible; accuracy of the dosing device should be checked.

## ADMINISTRATION

The dose is 1 mg fenbendazole/kg body weight/day (equivalent to 0,005 ml Panacur® AquaSol) via the drinking water. This dose must be administered on 5 consecutive days.

## Dose calculation

The required daily amount of product is calculated from the total estimated body weight (kg) of the entire group of chickens to be treated. Please use the following formula:

Amount of product/day = Total estimated body weight (kg) of chickens to be treated x 0,005 ml.

Example:

Total body weight of chickens to be treated	Amount of product per day (ml/day)	Total amount of product (ml/for 5 days)
40 000 kg	200 ml	1 000 ml (5 x 200 ml)
160 000 kg	800 ml	4 000 ml (5 x 800 ml)

## STORAGE

- Store at or below 30 °C.
- Do not freeze.
- Shelf-life after first opening the immediate packaging: 6 months.
- Shelf-life of the medicated water: 24 hours.

## WITHDRAWAL PERIOD

6 days for meat and offal at 1 mg/kg.

9 days for meat and offal at 2 mg/kg.

Eggs - zero days.

## PRESENTATION

Pack sizes of 1 l or 4 l.





Pharmaceuticals

# VAC-SAFE® DE-CHLORINATING TABLETS

## INDICATIONS

VAC-SAFE® is used to dechlorinate animal drinking water. It removes chlorine and chloramines completely. The product has a blue food colourant which allows to see its distribution in the water system and to monitor the vaccine administration.

## COMPOSITION

Each tablet contains:

Dechlorinating Agent (min) 1,25 g

FD & Blue I Colourant (min) 1,50 g

Vehicle q.s.p 7,00 g.

## WARNINGS

- The product may not be used for human consumption.
- Keep the individual packages well closed and in a dry and ventilated place, protected from moisture.
- If the product gets into your eyes, rinse them with abundant running water for at least 15 minutes.
- The product is effervescent and sensitive to the environment's relative humidity. After the sachet has been opened, add its contents immediately for the water to be dechlorinated.
- For animal use only.

## DIRECTIONS FOR USE

Dissolve an effervescent tablet in 100 litres of water containing up to 5 ppm of chlorine. After adding the tablet, allow 10 minutes for complete product dissolution and chlorine inactivation. It is recommended to homogenise the water using an agitator.

## PRESENTATION

Bucket containing 100 individually wrapped 7 g effervescent tablets.








100  
years | EXPERIENCE IN  
VACCINE R&D

# Poultry vaccine Diluents



Poultry vaccine  
Diluents





# POULTRY VACCINE DILUENTS

DILUENT NAME	PACK SIZE	FOR USE WITH MSD VACCINES
<b>NOBILIS® CA DILUENT</b> 	200 ml (1 000ds) 400 ml (2 000ds) 800 ml (4 000ds)	<b>Any MSD cell associated vaccines</b> Innovax® ILT Innovax® ND Innovax® ND-IBD Nobilis® Rismavac Nobilis® Rismavac+CA126
<b>NOBILIS® FD DILUENT</b> 	200 ml	Nobilis® SG9R
<b>DILUENT OCULO-NASAL</b> 	35 ml (1 000ds) 84 ml (2 500ds)	<b>Any freeze-dried MSD vaccine registered for eye drop application</b> Nobilis® IB Ma5 Nobilis® IB 4-91 Nobilis® ILT Nobilis® Ma5+Clone30 Nobilis® ND C2 Nobilis® ND Clone 30 Nobilis® Rhino CV LT-IVAX®



Poultry vaccine  
Diluents

# POULTRY VACCINE DILUENTS

DILUENT NAME	PACK SIZE	FOR USE WITH MSD VACCINES
<b>DILAVIA</b> 	200 ml	Nobilis® CAV P4
<b>STERILE DILUENT FOR WING-WEB</b> 	10 ml (1 000ds)	<b>Any MSD product registered for wing-web application</b> Tremvac-FP
<b>STERILE DILUENT TYPE A BLUE</b> 	30 ml (1 000ds)	Nobilis® ILT LT-IVAX®
<b>STERILE DYE</b> 	30 ml	<b>To colour vaccines to confirm successful vaccine application</b>



100  
years | EXPERIENCE IN  
VACCINE R&D

# General guidelines for vaccination



## General guidelines for vaccination

### SPRAY VACCINATION

#### SPRAY VACCINATION IS USED FOR LIVE VACCINES WHEN MASS APPLICATION IS REQUIRED

##### Diseases covered:

- Infectious Bronchitis (IB)
- Newcastle Disease (NCD)
- Turkey Rhinotracheitis (TRT)

With live vaccines the spray method allows for rapid and highly effective local immunity due to the effect on the respiratory mucous membranes.

##### There are four different techniques used to vaccinate day-old and older birds:

1. Automatic spray vaccination of day-old birds in the hatchery.
2. Knapsack spray vaccination of day-old birds on site.
3. Coarse spray vaccination using a knapsack sprayer for older birds (droplet size > 100 microns) – primer vaccination.
4. Aerosol equipment to spray vaccinate older birds with a very fine / mist spray (droplet size < 20 microns) – booster vaccination.

##### NB! Droplet size is very important to ensure accurate uptake of vaccine by the birds without causing severe vaccine reactions:

- The depth of the respiratory system that is penetrated depends on the droplet size.
- Aerosol sprays – droplets of vaccine penetrate very deeply into the system.
- In priming of day-old birds – aerosol vaccination will cause vaccine reactions therefore use must be made of a coarse spray.
- Booster vaccinations – deep penetration of the vaccine will result in better immunity.
- Droplet size is affected by the pressure at which the vaccine is applied and evaporation.
- Evaporation of vaccine droplets can play a role in the vaccine reactions.
- Evaporation causes coarse sprays to become aerosols.
- Pressure – a low pressure produces coarse sprays, and a high pressure is used for fine sprays.
- First day spray vaccination – automatic spray cabinets used in the hatchery for mass application.
- Use a coarse spray for priming of NCD vaccines – when only the upper respiratory tract is to be reached.
- Spray vaccination is usually reserved for respiratory infections:
  - IB
  - NCD
  - TRT.

##### Day-old farm vaccination with a knapsack sprayer.

- Do not place crates under or near a heat source (remember effects of evaporation).
- Hand sprayers not recommended – coarseness of spray is inconsistent because you cannot regulate the pressure.

##### Procedure for priming:

- For a 1 000 birds dissolve 1 000 doses of vaccine in 250 m<sup>3</sup> water at 10 – 15 °C.
- Use distilled water.
- Open vial under water – clean hands without soap/disinfectant residues on hand.
- Rinse vial 3x – get all the vaccine out the vial.
- Place vaccine solution in knapsack – clean but free of disinfectant or soap.
- Adjust spray pressure to give coarse spray (test against dark background).
- Hold the nozzle 40 cm above the birds, dampen chicks but do not wet them.
- Leave chicks to dry in box for 20 – 30 minutes.
- Use spray equipment only for vaccination and not for disinfecting.

##### Spray vaccination of older birds (coarse spray using knapsack sprayer):

- For a 1 000 birds: dissolve 1 000 doses vaccine in 500 – 1 000 m<sup>3</sup> distilled water at 10 – 15 °C.
- The ventilation system must be turned off during and for a short while after vaccination.
- Herd birds together.
- Create central path in full light.
- Dim lights while spraying.
- Lower the temperature by 1 – 2 °C.
- Hold the nozzle about 40 cm above the birds' head and move slowly right and left.
- Wear a face mask while spraying.
- Open-sided houses – vaccinate at night or around dawn (birds are calm and resting). Close the curtains to protect against wind from outside during vaccination.
- After vaccination – clean the vaccinating equipment inside and outside with hot water. **NB! DO NOT USE ANY SOAP OR DISINFECTANT**
- Ensure that the vaccination equipment is allowed to dry thoroughly before storage.
- Remember to turn the ventilation back on 15 to 30 minutes post vaccination depending on environmental conditions.

##### Spray vaccination of older birds (aerosol application):

- Aerosol spray from turbo-fogger or atom mister.
- Used to apply live mycoplasma vaccines e.g., NOBILIS® MG 6/85.
- To re-vaccinate (booster vaccinations) of older birds against IB or NCD – for deeper penetration of the respiratory tract.
- **NOTE: Birds must be healthy.**



## General guidelines for vaccination

- For a 1 000 birds: dissolve a 1 000 doses of vaccine in 400 ml water at 10 – 15 °C (use distilled water).
- Turn ventilators off while vaccinating and for 30 minutes after vaccination - this is dependent on the environmental conditions, do not allow birds to overheat.
- Wear protective gear for eyes/nose/mouth.
- Remember to turn the ventilation back on 15 to 30 minutes post vaccination depending on environmental conditions.

### DRINKING WATER

#### DRINKING WATER APPLICATION OF LIVE VACCINES IS THE LEAST LABOUR-INTENSIVE METHOD

##### Diseases that may be vaccinated by this method:

- Certain Infectious Bronchitis (IB) Vaccines
- Certain Newcastle Disease (NCD) Vaccines
- Avian Encephalomyelitis (AE)
- Salmonella
- Infectious Bursal Disease (IBD) (Gumboro)

##### General Precautions:

- Assess water quality regularly for pH level, chloride/heavy metal levels and bacterial contamination.
- Drinking equipment must be drained of water and birds must be thirsty before vaccination (allowing for sufficient vaccinated water uptake within the time limit).
- Duration of thirsting depends on the age of the birds and the weather. On average thirsting duration is 2 – 3 hours to allow for vaccinated water uptake within 2 – 2.5 hours.
- Vaccinating after feeding or when the birds wake-up (first light) will stimulate rapid water uptake.
- As rule of thumb birds under 14 days of age should not be vaccinated by drinking water method.

##### Trough System Instructions:

- Troughs must be cleaned and drained in advance.
- The system must be clean of disinfectant residues.
- Quantity of water in which vaccine is dissolved depends on the birds age.  
Rule of thumb:
- For each 1 000 birds dissolve 1 000 doses of vaccine in litres of water equivalent to age of birds i.e. 10 000 birds at 25 days of age > 10 x 25 = 250 litres of water.
- Birds older than 40 days: maximum of 40 litres per 1 000 birds.
- Use a dechlorinating agent to stabilise the water for vaccination prior to the addition of the vaccine.
- Dissolve the vaccine in small quantity of water (open vial under water and rinse vial 3 times).
- The concentrated vaccine solution is added to premeasured water to be added to the troughs.
- Stir the solution and place it in the troughs.

##### Nipple and Cup Drinker Instructions:

- Close the system.
- Raise the lines and open the tap at the end of the system to drain lines.
- Use a dechlorinating agent to stabilise the water for vaccination in the header tank prior to the addition of the vaccine.
- Dissolve vaccine in small quantity of water.
- Open vial under water and rinse 3 times.
- Stir concentrated vaccine solution and add to premeasured amount of water in the header water tank and stir again before opening the system.
- Use the amount of water as per the age of the birds, as explained with the trough systems.
- Only once all lines are filled with vaccinated water should you lower the lines.
- Especially for broilers and in hot weather when birds drink more water, it is advised to administer the vaccine in two batches.
- Half the vaccine is prepared and administered, when finished the second half is made and administered.
- A pH stabiliser colours the vaccine water blue and can be used to check if all chicks have been vaccinated (dye colours the tongue, beak and crop blue) and allows you to check if the vaccine water has reached the end of the line.
- Once vaccination is complete, open the main water source again to allow the header tank to be filled.

### EYEDROP

#### OCULO/NASAL APPLICATION IS THE TECHNIQUE FOR VACCINES ADMINISTERED VIA MUCOUS MEMBRANE

##### Diseases covered:

- Infectious Bronchitis (IB)
- Newcastle Disease (NCD)
- Infectious Laryngotracheitis (ILT)
- Turkey Rhinotracheitis (TRT)
- Each bird receives an adequate amount of vaccine for immediate and uniform reaction.
- Labour intensive.
- Dissolve vaccine in appropriate sterile diluent eg. Oculonasal diluent.
- Blue dye added to the solvent is an easy way to check if the bird has been vaccinated (blue tongue, even if given through the eye).
- Attach the correct eye dropper attachment for the diluent used.
- One drop is administered into the eye or nostril.

##### NB: Do not touch eyeball with dropper (eye damage and eye infection may result)

- Nasal administration – keep one nostril closed so vaccine is taken up more easily.
- Oculo/Nasal application – applied to birds of all ages.
- Hold the dropper vertically so that the droplet size stays constant, and less waste of vaccine occurs.
- Use all of the vaccine within the recommended time frame as per the manufacturer's guidelines.



## General guidelines for vaccination

### INJECTABLE

#### LIVE VACCINES - INJECTION METHOD

##### Diseases covered:

- Marek's Disease
- Salmonella
- To inject live vaccines a diluent is required.
- Ensure that the correct diluent is used for the vaccine to be administered.
- Ensure that there is no sediment in the diluent and no yellow discolouration which indicates contamination by bacteria or fungi.
- Handle vaccines in hygienic conditions.
- One should ideally have a separate room to store and handle vaccines.
- Transport and store the vaccine before use in a cooler box with ice packs.
- A sterile dye can be used to check that the vaccination technique is effective. Add 1 ml sterile dye to 1 000 ml solvent or 0,5 ml dye to 500 ml solvent.
- The vaccine must be administered within the time frame recommended by the manufacturer.
- Store and transport dissolved vaccine in cooler box with ice packs.

##### General rules when using Marek vaccines:

- Cell associated vaccines are stored and transported in liquid nitrogen (-196 °C).
- Wear safety equipment: gloves and goggles (ampoules may burst if brought to room temperature too rapidly).
- Thaw the ampoule by placing it in a water bath at 23 – 25 °C.
- Dry the ampoule to prevent contamination of vaccine when transferring it to the diluent.
- Use a large needle (18G) to transfer vaccine from the ampoule to prevent damage to the carrier cells.
- Transfer to the correct diluent (CA Diluent) which has been stored at room temperature.
- Once thawed the vaccine must be transferred to the diluent immediately.
- Once thawed the ampoule of vaccine cannot be transferred back to the liquid nitrogen – therefore remove number of ampoules required from the straw and return the rest immediately to the liquid nitrogen.

##### Day-old hatchery vaccination:

- The hatchery environment must be kept clean at all times.
- Vaccines can be administered subcutaneously in the neck or intramuscularly in the leg.
- Automatic vaccinators or handheld vaccinators may be used.
- Always check the equipment – ensure that it is clean and correctly calibrated.
- During vaccination, continuously mix the vaccine solution gently.
- Replace the needle frequently.
- Ensure that all the vaccine is used within the recommended time frame as per the manufacturer's guideline.
- Destroy all remaining vaccine.

#### WING-WEB VACCINATION

##### Diseases covered:

- Fowl Pox
- Avian Encephalomyelitis and Fowl Pox (AE+Pox)

- Dissolve vaccine in the diluent supplied with the vaccine.
- Wing-web method can be used in birds of all ages.
- Submerge needles in the vaccine solution and then insert into the wing-web.
- Insert needles in underside of the wing and not through the feathers – leaving the feathers in place will cause loss of vaccine.
- Do not insert the needle into the muscle – vaccine may be washed away by bleeding.
- Take care when removing the needles from the bottle – bumping the needle may result in too much vaccine being removed from the needle reservoir.
- Birds younger than 2 weeks – remove one needle.

#### KILLED VACCINES: WATER-IN-OIL EMULSION CONTAINING KILLED ANTIGEN (VIRUS OR BACTERIUM)

##### Inactivated vaccines can only be administered by injection.

##### Advantages of inactivated vaccines:

1. Long lasting, optimal and uniform immunity.
2. Fewer systemic reactions.
3. Fewer revaccinations in layers / breeders.
4. Reduce risk of interference (as may occur with combination live vaccines).
5. No risk of spreading.

#### INACTIVATED VACCINE APPLICATION

##### Inactivated vaccines used during the rearing phase of commercial layers and breeder flocks (older birds on farm) can be applied:

- subcutaneously (in the neck) or
- intramuscularly (in the breast or thigh).

##### Intramuscular vaccination

- In the breast – hold the injector parallel to the breast bone and towards the head.
- In the thigh – do not vaccinate near the bone or joints.  
Hold the injector away from the hock joint on the outer side of the thigh (the inner side contains the blood vessels and nerves).

##### Subcutaneous Vaccination:

- Usually, bacterial inactivated vaccines e.g. NOBILIS® CORYZA.
- Inject the vaccine in the lower part of neck away from the head.
- Vaccination too close to the head causes swelling and pain – the birds will not eat or drink due to the discomfort.

#### INACTIVATED VACCINE HANDLING

- Store vaccine in fridge at 4 – 8 °C.
- Bring vaccine to room temperature before injecting.
- Shake vaccine bottle before and during use.
- Use sterile needles and change regularly (1 needle per 500 to 1 000 birds).
- Ensure that the syringe is correctly calibrated.
- Ensure that the vaccine goes into the bird and not onto the feathers (no vaccine should leave the syringe before or after it is removed from the bird and ensure that the needle does not slide between the feathers and skin).
- Only vaccinate healthy birds.
- Do not store used vaccine bottles discard.



100  
years | EXPERIENCE IN  
VACCINE R&D

# Thank you

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