SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Rhemox 500 mg/g powder for use in drinking water for pigs, chicken broilers, duck broilers and turkeys for meat production [AT, BE, BG, CY, CZ, DE, EL, ES, HU, IE, IT, PT, RO, SI, SK, UK]
Rhemox 500 mg/g powder for use in drinking water for pigs, chickens, ducks and turkeys [PL]
Rhemox 435.6 mg/g powder for use in drinking water for pigs, chicken broilers, duck broilers and turkeys for meat production [FR]

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each g contains:

Active substance:
Amoxicillin trihydrate 500 mg
(Equivalent to 435.6 mg Amoxicillin)

"Only for France:"
Amoxicillin (as trihydrate) 435.6 mg
(Equivalent to 500 mg of Amoxicillin trihydrate)

Excipients:

Qualitative composition of excipients and other constituents
Sodium hexametaphosphate
Sodium dihydrogen phosphate anhydrous
Sodium carbonate
Silica, colloidal anhydrous

Fine and homogeneous white to cream white powder.

3. CLINICAL INFORMATION

3.1 Target species

Pigs.
Chicken (broiler), duck (broiler) and turkey (for meat production).

3.2 Indications for use for each target species

Pigs: Treatment of infections caused by strains of *Streptococcus suis* susceptible to amoxicillin.
Chicken broilers, duck broilers and turkeys for meat production: Treatment of pasteurellosis and colibacillosis caused by strains of *Pasteurella* spp. and *Escherichia coli* susceptible to amoxicillin.

3.3 Contraindications

Do not use in cases of hypersensitivity to the active substance, to penicillins, to other beta-lactams or to any of the excipients.
Do not use orally in rabbits, guinea pigs, hamsters or other small herbivores, given that amoxicillin, as for all aminopenicillins, has deleterious effects on caecal bacteria.
Do not use in horse given that amoxicillin, as all aminopenicillins, has an important effect on caecal bacteria.
Do not use orally in animals with functional rumen.
Do not use in animals with renal disease, including anuria and oliguria.

3.4 Special warnings

The use of the veterinary medicinal product should be combined with good management practices, i.e. good hygiene, proper ventilation, no overstocking.
The uptake of medication by animals can be altered as a consequence of illness. In case of insufficient uptake of water, animals should be treated parenterally.

3.5 Special precautions for use

Special precautions for safe use in the target species:
The veterinary medicinal product is not effective against beta-lactamase producing organisms.
Use of the veterinary medicinal product should be based on identification and susceptibility testing of the target pathogen(s). If this is not possible, therapy should be based on epidemiological information and knowledge of susceptibility of the target pathogens at farm level, or at local/regional level.
Use of the veterinary medicinal product should be in accordance with official, national and regional antimicrobial policies.
Use of the veterinary medicinal product deviating from the instructions given in the SPC may increase the prevalence of bacteria resistant to amoxicillin and may decrease the effectiveness of treatment with other penicillins, due to the potential for cross-resistance.
Narrow spectrum antibiotic therapy with a lower risk of antimicrobial resistance selection should be used for first line treatment where susceptibility testing suggests the likely efficacy of this approach.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:

Penicillins and cephalosporins may cause hypersensitivity reactions (allergy) following injection, inhalation, ingestion or contact with the skin. Hypersensitivity to penicillins may lead to cross reactions to cephalosporins and vice versa. Allergic reactions to these substances may occasionally be serious. This veterinary medicinal product might be irritant to skin, eyes and mucous membranes.

Do not handle the veterinary medicinal product if you are allergic to penicillins and/or cephalosporins or if you have been advised not to work with such preparations.

Handle the veterinary medicinal product with great care to avoid inhaling the dust and contact with the skin, eyes and mucous membranes, during preparation and administration of medicated water, taking special precautions.

Personal protective equipment consisting of either a disposable half-mask respirator conforming to European Standard EN149 or a non-disposable respirator to European Standard EN140 with a filter to EN143, gloves, overalls and approved goggles should be worn when handling the veterinary medicinal product or medicated water.

Do not smoke, eat or drink while handling the veterinary medicinal product.

Wash hands after use.

In case of contact with the skin, eyes and mucous membranes, rinse with plenty of clean water.

If symptoms appear following exposure, such as a skin rash, seek medical advice and show the package leaflet or the label to the physician. Swelling of the face, lips or eyes or difficulty with breathing are more serious symptoms and require urgent medical attention.

Special precautions for the protection of the environment:

Not applicable.

3.6 Adverse events

Pigs, chicken broilers, duck broilers and turkeys for meat production:

Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Hypersensitivity reaction[1] (e.g. rash and anaphylactic shock) Digestive tract disorders (e.g. vomiting, diarrhoea) Opportunistic infection[2]

[1] May occasionally be serious. The severity varies from skin rash to anaphylactic shock.

[2] From non-sensitive microorganisms after prolonged use.

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or its local representative or the national competent authority via the

national reporting system. See the package leaflet for respective contact details.

3.7 Use during pregnancy, lactation or lay

Pregnancy and lactation:
Laboratory studies in rats and mice have not produced any evidence of teratogenic, foetotoxic, maternotoxic effects.
The safety of the veterinary medicinal product has not been established during pregnancy or lactation in sows. Use only according to the benefit-risk assessment by the responsible veterinarian.

3.8 Interaction with other medicinal products and other forms of interaction

Do not use simultaneously with neomycin since it blocks the absorption of oral penicillins.
Do not use together with bacteriostatic antibiotics, such as tetracyclines, macrolides, sulphonamides, as they can antagonise the bactericidal effect of penicillins.

3.9 Administration routes and dosage

In drinking water use. Clear and colourless liquid when in solution.
Medicated drinking water should be refreshed or replaced every 24 hours.
The uptake of medicated water depends on the clinical condition of the animals,. In order to obtain the correct dosage, the concentration of amoxicillin may need to be adjusted accordingly.
To ensure a correct dosage, bodyweight should be determined as accurately as possible to avoid underdosing.

Dosage and treatment regimen

Pigs: 20 mg of amoxicillin trihydrate – equivalent to 17.4 mg of amoxicillin/kg of body weight/day (corresponding to 40 mg of the veterinary medicinal product/kg bodyweight/day) for 4 days.
Broilers: 15 mg of amoxicillin trihydrate – equivalent to 13.1 mg of amoxicillin/kg of body weight/day (corresponding to 30 mg of the veterinary medicinal product/kg bodyweight/day) for 5 days.
Duck broilers: 20 mg of amoxicillin trihydrate – equivalent to 17.4 mg of amoxicillin/kg of body weight/day (corresponding to 40 mg of the veterinary medicinal product/kg bodyweight/day) for 3 days.
Turkeys for meat production: 15 to 20 mg of amoxicillin trihydrate – equivalent to 13.1 to 17.4 mg of amoxicillin/kg of body weight/day (corresponding to 30-40 mg of the veterinary medicinal product/kg bodyweight/day) for 5 days.

Based on the recommended dose and the number and weight of animals to be treated, the exact daily concentration of the veterinary medicinal product should be calculated according to the following formula:

$$\frac{\text{Dose (mg veterinary medicinal product per kg body weight per day)} \times \text{mean body weight (kg) of animals to be treated}}{\text{mean daily water consumption (litre) per animal per day}} = \text{___ mg veterinary medicinal product per litre drinking water}$$

The product must first be diluted in a small quantity of water in order to obtain a stock solution which is either further diluted in the drinking water tank or introduced via a water proportioner pump. When using a proportioner, adjust the pump between 2 to 5% and adapt the volume of preparation accordingly. The maximum solubility of the veterinary medicinal product is 20 g/l.

The use of suitably calibrated weighing equipment for the administration of the calculated amount of the veterinary medicinal product is recommended.

Prepare the solution with fresh tap water immediately before use.
Water uptake should be monitored at frequent intervals during medication.
In order to ensure consumption of the medicated water, animals should not have access to other water supplies whilst being treated.
After the end of the medication period, the water supply system should be cleaned appropriately to avoid intake of sub-therapeutic amounts of the active substance.

3.10 Symptoms of overdose (and where applicable, emergency procedures and antidotes)

No other adverse reactions are known than those mentioned in section 3.6.
In case of overdose, the treatment should be symptomatic. No specific antidote is available.

3.11 Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance

3.12 Withdrawal periods

Meat and offal: Pigs: 6 days.
Chickens: 1 day.
Turkeys: 5 days.
Ducks: 9 days.

Not for use in birds producing eggs for human consumption.
Do not use within 4 weeks before the start of the laying period.

4. PHARMACOLOGICAL INFORMATION

4.1 ATCvet code:

QJ01CA04

4.2 Pharmacodynamics

Amoxicillin is a broad spectrum β-lactam antibiotic belonging to the aminopenicillins group. It has bactericidal activity and acts against Gram-positive and Gram-negative microorganisms.

Mechanism of action

The antibacterial mechanism of action of amoxicillin consists of the inhibition of the biochemical processes of bacterial cell wall synthesis by selectively and irreversible blocking different enzymes involved in such processes, largely transpeptidase, endopeptidase and carboxypeptidase. The inadequate synthesis of the bacterial wall in susceptible species produces an osmotic imbalance which particularly affects growing bacteria (when bacterial wall synthesis processes are especially important), finally leading to lysis of the bacterial cell.

Spectrum of action

The species considered to be sensitive to amoxicillin include:

- Gram-positive bacteria.

    Streptococci (*Streptococcus suis*)

- Gram-negative bacteria:

    Pasteurella spp.

    Escherichia coli

However, the bacteria which generally present resistance to amoxicillin are:

- Penicillinase-producing staphylococci.

- Some enterobacteria such as *Klebsiella spp., Enterobacter spp., Proteus spp.* and other gram-negative bacteria such as *Pseudomonas aeruginosa*.

The principal mechanism of bacterial resistance to amoxicillin is the production of β-lactamases, enzymes which inactivate the antibacterial product by hydrolysis of the β-lactam ring, thus obtaining penicillanic acid, a stable but inactive compound. Bacterial β-lactamases can be acquired via plasmids or can be constitutive (chromosomal).

These β-lactamases are exocellular in Gram-positive bacteria (*Staphylococcus aureus*) and found in the periplasmic space in Gram-negative bacteria.

Gram-positive bacteria are capable of producing and secreting large quantities of β-lactamases. These enzymes are encoded in plasmids which can be transferred by phages to other bacteria.

Gram-negative bacteria such as *E. coli* produce different types of β-lactamases which remain in the periplasmic space. They are encoded in both the chromosome and the plasmids.

The mechanism of resistance to penicillin by *S. suis* involves modifications in Penicillin-Binding Proteins (PBPs) in the form of overproduction and/ or a decreased affinity for penicillin. Penicillin resistance in *S. suis* is chromosomally encoded.

Antimicrobial resistance in *P. multocida* has been related to small, nonconjugative plasmids encoding beta-lactamases conferring resistance to ampicillin.

There is complete cross-resistance between amoxicillin and other penicillins, in particular, other aminopenicillins (ampicillin).

4.3 Pharmacokinetics

General

Absorption of oral amoxicillin is independent from food intake and peak plasma concentrations are reached rapidly in most animal species, from 1 to 2 hours after the veterinary medicinal product's administration.

Amoxicillin binds sparingly to plasma proteins and rapidly spreads to the body fluids and tissues. Amoxicillin is widely distributed in the extracellular compartment. Its distribution to the tissues is facilitated by its low binding rate to plasma proteins.

The metabolism of amoxicillin is limited to hydrolysis of the β-lactam ring, leading to the release of inactive penicillanic acid (20%). Biotransformation takes place in the liver.

Most amoxicillin is eliminated through the kidneys in active form. It is also excreted in small quantities in milk and bile.

CHICKEN BROILERS

Oral bioavailability is about 67%. Maximum plasma concentration is reached in around one hour. It is well and quickly distributed in the organism, with low binding to plasma proteins (17-20%).

PIGS

After the administration of the veterinary medicinal product at the recommended dose in drinking water, plasma concentrations ranged from 0.53 μg/ml (C_{max}) to 0.27 μg/ml (C_{min}). Steady state was reached 10 hours after the first administration.

5. PHARMACEUTICAL PARTICULARS

5.1 Major incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

5.2 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 2 years.

Shelf life after first opening the immediate packaging: 3 months.
Shelf life after dissolution according to directions: 16 hours.

5.3 Special precautions for storage

This veterinary medicinal product does not require any special storage conditions.

5.4 Nature and composition of immediate packaging

Bags of a complex film comprising an outer layer of polyester, an intermediate layer of aluminium and an inner layer of transparent polyethylene.

Package sizes:
Bag of 400 g
Bag of 1 kg

Not all pack sizes may be marketed.

5.5 Special precautions for the disposal of unused veterinary medicinal products or waste materials derived from the use of such products

Medicines should not be disposed of via wastewater or household waste.
Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned.

6. NAME OF THE MARKETING AUTHORISATION HOLDER

Industrial Veterinaria, S.A.

7. MARKETING AUTHORISATION NUMBER(S)

8. DATE OF FIRST AUTHORISATION

Date of first authorisation:

9. DATE OF THE LAST REVISION OF THE SUMMARY OF THE PRODUCT CHARACTERISTICS

10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS

Veterinary medicinal product subject to prescription.

Detailed information on this veterinary medicinal product is available in the Union Product Database (https://medicines.health.europa.eu/veterinary).

LABELLING AND PACKAGE LEAFLET

A. LABELLING

PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGE

Bags of 400 g and 1 kg.

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Rhemox 500 mg/g powder for use in drinking water [AT, BE, BG, CY, CZ, DE, EL, ES, HU, IE, IT, PT, RO, SI, SK, UK]
Rhemox 500 mg/g powder for use in drinking water [PL]
Rhemox 435.6 mg/g powder for use in drinking water [FR]

2. STATEMENT OF ACTIVE SUBSTANCES

Each g contains:
Amoxicillin trihydrate 500 mg
(Equivalent to 435.6 mg Amoxicillin)

"Only for France:"
Amoxicillin (as trihydrate) 435.6 mg
(Equivalent to 500 mg of Amoxicillin trihydrate)

3. PACKAGE SIZE

400 g
1 kg

4. TARGET SPECIES

Pigs
Chicken (broiler), duck (broiler) and turkey (for meat production)

5. INDICATIONS

6. ROUTES OF ADMINISTRATION

In drinking water use.

7. WITHDRAWAL PERIODS

Withdrawal period:
Meat and offal: Pigs: 6 days.
Chickens: 1 day.

Turkeys: 5 days
Ducks: 9 days.

Not for use in birds producing eggs for human consumption.
Do not use within 4 weeks before the start of the laying period.

8. EXPIRY DATE

Exp. {mm/yyyy}

Shelf-life after first opening the container: 3 months.
Shelf life after dissolution according to directions: 16 hours.
Once opened, use by…

9. SPECIAL STORAGE PRECAUTIONS

10. THE WORDS "READ THE PACKAGE LEAFLET BEFORE USE"

Read the package leaflet before use.

11. THE WORDS "FOR ANIMAL TREATMENT ONLY"

For animal treatment only.

12. THE WORDS "KEEP OUT OF THE SIGHT AND REACH OF CHILDREN"

Keep out of the sight and reach of children.

13. NAME OF THE MARKETING AUTHORISATION HOLDER

Industrial Veterinaria, S.A.

14. MARKETING AUTHORISATION NUMBERS

15. BATCH NUMBER

Lot {number}

B. PACKAGE LEAFLET

PACKAGE LEAFLET:

1. Name of the veterinary medicinal product

Rhemox 500 mg/g powder for use in drinking water for pigs, chicken broilers, duck broilers and turkeys for meat production [AT, BE, BG, CY, CZ, DE, EL, ES, HU, IE, IT, PT, RO, SI, SK, UK]
Rhemox 500 mg/g powder for use in drinking water for pigs, chickens, ducks and turkeys [PL]
Rhemox 435.6 mg/g powder for use in drinking water for pigs, chicken broilers, duck broilers and turkeys for meat production [FR]

2. Composition

Each g contains:

Active substance:
Amoxicillin trihydrate 500 mg
(Equivalent to 435.6 mg Amoxicillin)

"Only for France:"
Amoxicillin (as trihydrate) 435.6 mg
(Equivalent to 500 mg of Amoxicillin trihydrate)

Fine and homogeneous white to cream white powder.

3. Target species

Pigs
Chicken (broiler), duck (broiler) and turkey (for meat production)

4. Indications for use

Pigs: Treatment of infections caused by strains of *Streptococcus suis* susceptible to amoxicillin.
Chicken broilers, duck broilers and turkeys for meat production: Treatment of pasteurellosis and colibacillosis caused by strains of *Pasteurella spp*. and *Escherichia coli* susceptible to amoxicillin.

5. Contraindications

Do not use in cases of hypersensitivity to the active substance, to penicillins, to other beta-lactams or to any of the excipients.
Do not use orally in rabbits, guinea pigs, hamsters or other small herbivores, given that amoxicillin, as for all aminopenicillins, has deleterious effects on caecal bacteria.

Do not use in horse given that amoxicillin, as all aminopenicillins, has an important effect on caecal bacteria.
Do not use orally in animals with functional rumen.
Do not use in animals with renal disease, including anuria and oliguria.

6. Special warnings

Special warnings:
The use of the veterinary medicinal product should be combined with good management practices, i.e. good hygiene, proper ventilation, no overstocking.
The uptake of medication by animals can be altered as a consequence of illness. In case of insufficient uptake of water, animals should be treated parenterally.

Special precautions for safe use in the target species:
The veterinary medicinal product is not effective against beta-lactamase producing organisms.
Use of the veterinary medicinal product should be based on identification and susceptibility testing of the target pathogen(s). If this is not possible, therapy should be based on epidemiological information and knowledge of susceptibility of the target pathogens at farm level, or at local/regional level.

Use of the veterinary medicinal product should be in accordance with official, national and regional antimicrobial policies.

Use of the veterinary medicinal product deviating from the instructions given in the SPC may increase the prevalence of bacteria resistant to amoxicillin and may decrease the effectiveness of treatment with other penicillins, due to the potential for cross-resistance.
Narrow spectrum antibiotic therapy with a lower risk of antimicrobial resistance selection should be used for first line treatment where susceptibility testing suggests the likely efficacy of this approach.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:
Penicillins and cephalosporins may cause hypersensitivity reactions (allergy) following injection, inhalation, ingestion or contact with the skin. Hypersensitivity to penicillins may lead to cross reactions to cephalosporins and vice versa. Allergic reactions to these substances may occasionally be serious. This veterinary medicinal product might be irritant to skin, eyes and mucous membranes.
Do not handle the veterinary medicinal product if you are allergic to penicillins and/or cephalosporins or if you have been advised not to work with such preparations.
Handle the veterinary medicinal product with great care to avoid inhaling the dust and contact with the skin, eyes and mucous membranes, during preparation and administration of medicated water, taking special precautions.
Personal protective equipment consisting of either a disposable half-mask respirator conforming to European Standard EN149 or a non-disposable respirator to European Standard EN140 with a filter to EN143, gloves, overalls and approved goggles should be worn when handling the veterinary medicinal product or medicated water.

Do not smoke, eat or drink while handling the veterinary medicinal product.
Wash hands after use.
In case of contact with the skin, eyes and mucous membranes, rinse with plenty of clean water.

If symptoms appear following exposure, such as a skin rash, seek medical advice and show the package leaflet or the label to the physician. Swelling of the face, lips or eyes or difficulty with breathing are more serious symptoms and require urgent medical attention.

Pregnancy and lactation:
Laboratory studies in rats and mice have not produced any evidence of teratogenic, foetotoxic, maternotoxic effects.
The safety of the veterinary medicinal product has not been established during pregnancy or lactation in sows. Use only according to the benefit-risk assessment by the responsible veterinarian.

Interaction with other medicinal products and other forms of interaction:
Do not use simultaneously with neomycin since it blocks the absorption of oral penicillins.
Do not use together with bacteriostatic antibiotics, such as tetracyclines, macrolides, sulphonamides, as they can antagonise the bactericidal effect of penicillins.

Overdose:
No other adverse reactions are known than those mentioned in section 7.
In case of overdose, the treatment should be symptomatic. No specific antidote is available.

Major incompatibilities:
In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

7. Adverse events

Pigs, chicken broilers, duck broilers and turkeys for meat production:

Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Hypersensitivity reaction[1] (e.g. rash and anaphylactic shock) Digestive tract disorders (e.g. vomiting, diarrhoea) Opportunistic infection[2]

[1] May occasionally be serious. The severity varies from skin rash to anaphylactic shock.

[2] From non-sensitive microorganisms after prolonged use.

Reporting adverse events is important. It allows continuous safety monitoring of a product. If you notice any side effects, even those not already listed in this package leaflet, or you think that the medicine has not worked, please contact, in the first instance, your veterinarian. You can also report any adverse events to the marketing authorisation holder or the local representative of the marketing authorisation holder using the contact details at the end of this leaflet, or via your national reporting system: <{national system details}>.

8. Dosage for each species, routes and method of administration

In drinking water use. Clear and colourless liquid when in solution.

Dosage and treatment regimen
Pigs: 20 mg of amoxicillin trihydrate – equivalent to 17.4 mg of amoxicillin/kg of body weight/day (corresponding to 40 mg of the veterinary medicinal product/kg bodyweight/day) for 4 days.
Broilers: 15 mg of amoxicillin trihydrate – equivalent to 13.1 mg of amoxicillin/kg of body weight/day (corresponding to 30 mg of the veterinary medicinal product/kg bodyweight/day) for 5 days.
Duck broilers: 20 mg of amoxicillin trihydrate – equivalent to 17.4 mg of amoxicillin/kg of body weight/day (corresponding to 40 mg of the veterinary medicinal product/kg bodyweight/day) for 3 days.
Turkeys for meat production: 15 to 20 mg of amoxicillin trihydrate – equivalent to 13.1 to 17.4 mg of amoxicillin/kg of body weight/day (corresponding to 30-40 mg of the veterinary medicinal product/kg bodyweight/day) for 5 days.

9. Advice on correct administration

Medicated drinking water should be refreshed or replaced every 24 hours.
To ensure a correct dosage, bodyweight should be determined as accurately as possible to avoid underdosing.
The uptake of medicated water depends on the clinical condition of the animals. In order to obtain the correct dosage, the concentration of amoxicillin may need to be adjusted accordingly.
Based on the recommended dose and the number and weight of animals to be treated, the exact daily concentration of the veterinary medicinal product should be calculated according to the following formula:

$$\frac{\text{Dose (mg veterinary medicinal product per kg body weight per day)} \times \text{mean body weight (kg) of animals to be treated}}{\text{mean daily water consumption (litre) per animal per day}} = \text{___ mg veterinary medicinal product per litre drinking water}$$

The product must first be diluted in a small quantity of water in order to obtain a stock solution which is either further diluted in the drinking water tank or introduced via a water proportioner pump. When using a proportioner, adjust the pump between 2 to 5% and adapt the volume of preparation accordingly. The maximum solubility of the veterinary medicinal product is 20 g/l.

The use of suitably calibrated weighing equipment for the administration of the calculated amount of the veterinary medicinal product is recommended.
Prepare the solution with fresh tap water immediately before use.
Water uptake should be monitored at frequent intervals during medication.
In order to ensure consumption of the medicated water, animals should not have access to other water supplies whilst being treated.

After the end of the medication period, the water supply system should be cleaned appropriately to avoid intake of sub-therapeutic amounts of the active substance.

10. Withdrawal periods

Meat and offal: Pigs: 6 days.
Chickens: 1 day.
Turkeys: 5 days.
Ducks: 9 days.
Not for use in birds producing eggs for human consumption.
Do not use within 4 weeks before the start of the laying period.

11. Special storage precautions

Keep out of the sight and reach of children.
This veterinary medicinal product does not require any special storage conditions.
Do not use this veterinary medicinal product after the expiry date which is stated on the label after Exp. The expiry date refers to the last day of that month.
Shelf-life after first opening the immediate packaging: 3 months.
Shelf life after dissolution according to directions: 16 hours.

12. Special precautions for disposal

Medicines should not be disposed of via wastewater or household waste.
Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any applicable national collection systems. These measures should help to protect the environment.
Ask your veterinary surgeon or pharmacist how to dispose of medicines no longer required.

13. Classification of veterinary medicinal products

Veterinary medicinal product subject to prescription.

14. Marketing authorisation numbers and pack sizes

Package sizes:
Bag of 400 g
Bag of 1 kg

Not all pack sizes may be marketed.

15. Date on which the package leaflet was last revised

Detailed information on this veterinary medicinal product is available in the Union Product Database (https://medicines.health.europa.eu/veterinary).

16. Contact details

Marketing authorisation holder <and manufacturer responsible for batch release>:
Industrial Veterinaria, S.A.
Esmeralda 19
08950 Esplugues de Llobregat (Barcelona) Spain

Manufacturer responsible for batch release:
aniMedica Herstellungs GmbH
Pappelstr. 7 72160 Horb a. N
Germany

Industria Italiana Integratori Trei S.p.A.
Via Affarosa, 4
42010 Rio Saliceto (RE) Italy

<Local representatives <and contact details to report suspected adverse reactions>:>
To be completed nationally

PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGE - <u>COMBINED LABEL AND PACKAGE LEAFLET</u>

Bag 1 kg.

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Rhemox 500 mg/g powder for use in drinking water for pigs, chickens, ducks and turkeys [PL]

Rhemox 435.6 mg/g powder for use in drinking water for pigs, chicken broilers, duck broilers and turkeys for meat production [FR]

2. COMPOSITION

Each g contains:
Active substance:
Amoxicillin trihydrate 500 mg
(Equivalent to 435.6 mg Amoxicillin)

"Only for France:"
Amoxicillin (as trihydrate) 435.6 mg
(Equivalent to 500 mg of Amoxicillin trihydrate)
Fine and homogeneous white to cream white powder.

3. PACKAGE SIZE

1 kg

4. TARGET SPECIES

Pigs
Chicken (broiler), duck (broiler) and turkey (for meat production)

5. INDICATIONS FOR USE

Indications for use
Pigs: Treatment of infections caused by strains of *Streptococcus suis* susceptible to amoxicillin.
Chicken broilers, duck broilers and turkeys for meat production: Treatment of pasteurellosis and colibacillosis caused by strains of *Pasteurella spp*. and *Escherichia coli* susceptible to amoxicillin.

6. CONTRAINDICATIONS

Contraindications
Do not use in cases of hypersensitivity to the active substance, to penicillins, to other beta-lactams or to any of the excipients.
Do not use orally in rabbits, guinea pigs, hamsters or other small herbivores, given that amoxicillin, as for all aminopenicillins, has deleterious effects on caecal bacteria.
Do not use in horse given that amoxicillin, as all aminopenicillins, has an important effect on caecal bacteria.
Do not use orally in animals with functional rumen.
Do not use in animals with renal disease, including anuria and oliguria.

7. SPECIAL WARNINGS

Special warnings
Special warnings:The use of the veterinary medicinal product should be combined with good management practices, i.e. good hygiene, proper ventilation, no overstocking.
The uptake of medication by animals can be altered as a consequence of illness. In case of insufficient uptake of water, animals should be treated parenterally.

Special precautions for safe use in the target species:
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Do not handle the veterinary medicinal product if you are allergic to penicillins and/or cephalosporins or if you have been advised not to work with such preparations.
Handle the veterinary medicinal product with great care to avoid inhaling the dust and contact with the skin, eyes and mucous membranes, during preparation and administration of medicated water, taking special precautions.
Personal protective equipment consisting of either a disposable half-mask respirator conforming to European Standard EN149 or a non-disposable respirator to European Standard EN140 with a filter to EN143, gloves, overalls and approved goggles should be worn when handling the veterinary medicinal product or medicated water.

Do not smoke, eat or drink while handling the veterinary medicinal product.
Wash hands after use.
In case of contact with the skin, eyes and mucous membranes, rinse with plenty of clean water.
If symptoms appear following exposure, such as a skin rash, seek medical advice and show the package leaflet or the label to the physician. Swelling of the face, lips or eyes or difficulty with breathing are more serious symptoms and require urgent medical attention.

Pregnancy and lactation:
Laboratory studies in rats and mice have not produced any evidence of teratogenic, foetotoxic, maternotoxic effects.
The safety of the veterinary medicinal product has not been established during pregnancy or lactation in sows. Use only according to the benefit-risk assessment by the responsible veterinarian.

Interactions with other medicinal products and other forms of interaction:
Do not use simultaneously with neomycin since it blocks the absorption of oral penicillins.
Do not use together with bacteriostatic antibiotics, such as tetracyclines, macrolides, sulphonamides, as they can antagonise the bactericidal effect of penicillins.

Overdose:
No other adverse reactions are known than those mentioned in section 8.
In case of overdose, the treatment should be symptomatic. No specific antidote is available.

Major incompatibilities:
In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

8. ADVERSE EVENTS

Adverse events

Pigs, chicken broilers, duck broilers and turkeys for meat production:

Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Hypersensitivity reaction[1] (e.g. rash and anaphylactic shock) Digestive tract disorders (e.g. vomiting, diarrhoea) Opportunistic infection[2]

[1] May occasionally be serious. The severity varies from skin rash to anaphylactic shock.
[2] From non-sensitive microorganisms after prolonged use.

Reporting adverse events is important. It allows continuous safety monitoring of a product. If you notice any side effects, even those not already listed on this label, or you think that the medicine has not worked, please contact, in the first instance, your veterinarian. You can also report any adverse events to the marketing authorisation holder or the local representative of the marketing authorisation holder using the contact details on this label, or via your national reporting system: <{national system details}>.

9. DOSAGE FOR EACH TARGET SPECIES, ROUTES AND METHOD OF ADMINISTRATION

Dosage for each species, routes and method of administration

In drinking water use. Clear and colourless liquid when in solution.
Medicated drinking water should be refreshed or replaced every 24 hours.
The uptake of medicated water depends on the clinical condition of the animals, the environment, the age and the kind of feed provided. In order to obtain the correct dosage, the concentration of active substance has to be adjusted accordingly.

Dosage and treatment regimen
Pigs: 20 mg of amoxicillin trihydrate – equivalent to 17.4 mg of amoxicillin/kg of body weight/day (corresponding to 40 mg of the veterinary medicinal product/kg bodyweight/day) for 4 days.
Broilers: 15 mg of amoxicillin trihydrate – equivalent to 13.1 mg of amoxicillin/kg of body weight/day (corresponding to 30 mg of the veterinary medicinal product/kg bodyweight/day) for 5 days.
Duck broilers: 20 mg of amoxicillin trihydrate – equivalent to 17.4 mg of amoxicillin/kg of body weight/day (corresponding to 40 mg of the veterinary medicinal product/kg bodyweight/day) for 3 days.
Turkeys for meat production: 15 to 20 mg of amoxicillin trihydrate – equivalent to 13.1 to 17.4 mg of amoxicillin/kg of body weight/day (corresponding to 30-40 mg of the veterinary medicinal product/kg bodyweight/day) for 5 days.

10. ADVICE ON CORRECT ADMINISTRATION

Advice on correct administration

Medicated drinking water should be refreshed or replaced every 24 hours.
To ensure a correct dosage, bodyweight should be determined as accurately as possible to avoid underdosing.

The uptake of medicated water depends on the clinical condition of the animals. In order to obtain the correct dosage, the concentration of amoxicillin may need to be adjusted accordingly.
Based on the recommended dose and the number and weight of animals to be treated, the exact daily concentration of the veterinary medicinal product should be calculated according to the following formula:

$$\frac{\text{Dose (mg veterinary medicinal product per kg body weight per day)} \times \text{mean body weight (kg) of animals to be treated}}{\text{mean daily water consumption (litre) per animal per day}} = \text{\_\_\_ mg veterinary medicinal product per litre drinking water}$$

The product must first be diluted in a small quantity of water in order to obtain a stock solution which is either further diluted in the drinking water tank or introduced via a water proportioner pump. When using a proportioner, adjust the pump between 2 to 5% and adapt the volume of preparation accordingly. The maximum solubility of the veterinary medicinal product is 20 g/l.

The use of suitably calibrated weighing equipment for the administration of the calculated amount of the veterinary medicinal product is recommended.

Prepare the solution with fresh tap water immediately before use.
Water uptake should be monitored at frequent intervals during medication.
In order to ensure consumption of the medicated water, animals should not have access to other water supplies whilst being treated.
After the end of the medication period, the water supply system should be cleaned appropriately to avoid intake of sub-therapeutic amounts of the active substance.

11. WITHDRAWAL PERIODS

Withdrawal periods

Meat and offal: Pigs: 6 days.
Chickens: 1 day.
Turkeys: 5 days.
Ducks: 9 days.
Not for use in birds producing eggs for human consumption.
Do not use within 4 weeks before the start of the laying period.

12. SPECIAL STORAGE PRECAUTIONS

Special storage precautions

Keep out of the sight and reach of children.
This veterinary medicinal product does not require any special storage conditions.
Do not use this veterinary medicinal product after the expiry date which is stated on the label after Exp. The expiry date refers to the last day of that month.

13. SPECIAL PRECAUTIONS FOR DISPOSAL

Special precautions for disposal

Medicines should not be disposed of via wastewater or household waste.
Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any applicable national collection systems. These measures should help to protect the environment.
Ask your veterinary surgeon or pharmacist how to dispose of medicines no longer required.

14. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS

Classification of veterinary medicinal products
Veterinary medicinal product subject to prescription.

15. MARKETING AUTHORISATION NUMBERS AND PACK SIZES

Pack sizes: Bags of 400 g and 1 kg.
Not all pack sizes may be marketed.

16. DATE ON WHICH THE LABEL WAS LAST REVISED

Date on which the label was last revised
{MM/YYYY}

Detailed information on this veterinary medicinal product is available in the Union Product Database.

17. CONTACT DETAILS

Contact details
Marketing authorisation holder <and manufacturer responsible for batch release>:
Industrial Veterinaria, S.A.
Esmeralda 19
08950 Esplugues de Llobregat (Barcelona) Spain

Manufacturer responsible for batch release:
aniMedica Herstellungs GmbH
Pappelstr. 7 72160 Horb a. N
Germany

Industria Italiana Integratori Trei S.p.A.
Via Affarosa, 4
42010 Rio Saliceto (RE) Italy

<Local representatives <and contact details to report suspected adverse reactions>:>
To be completed nationally

18. OTHER INFORMATION

<Other information>

19. THE WORDS "FOR ANIMAL TREATMENT ONLY"

For animal treatment only.

20. EXPIRY DATE

Exp {mm/yyyy}
Shelf-life after first opening the immediate packaging: 3 months.
Shelf life after dissolution according to directions: 16 hours.
Once opened, use by…

21. BATCH NUMBER

Lot {number}