Quality of Veterinary Medicinal Products

How to ensure the quality of Veterinary Medicinal Products

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INTRODUCTION

Ensuring the quality of Veterinary Medicinal products (VMPs) is an essential and basic requirement for the good governance of VMPs.

Three Pilars

- MARKETING AUTHORIZATION
- INSPECTION
- SURVEILLANCE
Marketing Authorisation dossier

- **Part 1: Administrative Part**
  summary of the dossier

- **Part 2: Pharmaceutical quality Part**
  Constituents, Manufacturing process, Control of starting materials, tests carried out at intermediate stages of the process, finished product …

- **Part 3: Safety and residues tests Part**
  Toxicology tests (single dose toxicity, repeat dose, effects on reproduction), user safety, environmental risk assessment ...(chemical products), administration of one dose, overdose, repeated administration, effects on reproductive performance…(immunological products)

- **Part 4: Efficacy tests**
  Preclinical and clinical trials…
QUALITY PART

A. Qualitative and Quantitative Particulars of the Constituents:
   • Composition: Objective: Describe precisely the product
   • Development Pharmaceutics:
     Objective: Justify the formula, choice of containers, manufacturing process

B. Description of the Manufacturing Method:
   • Description of manufacturing process, GMPs for all sites needed
     Objective: quality of finished product is reproducible
C - Control of Starting Materials
Objective: Ensure that the product contains starting materials of good and controlled quality

D - Control Tests Carried out at intermediate stages of the Manufacturing Process

E - Tests on the Finished Product
Objectives: Define precisely the specifications of the products, define limits of acceptance
Important for the Quality control by the authorities.
QUALITY PART

F - Stability Test

Objectives:

- Propose a shelf-life as package for sale, and storage conditions if necessary
- Propose a shelf-life after first opening of the immediate packaging
- Propose a shelf-life after dilution or reconstitution
- Propose a shelf-life after incorporation into meal or pelleted feed

G - Other Information
VICH guidelines available

OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals
Inspection
Quality during manufacturing, Storage and Distribution

- Transparency:
  - Official list of the premises
  - Website

Good practices:
- Conditions of manufacturing
- Traceability
- Conditions of Storage
- Conditions of deliverance
An appropriate regulatory framework

Need of prior Authorization and periodic control for Veterinary Product companies

Manufacturer, Importer, Wholesaler...

- These activities should be governed by rules:
  - Good practices as
    - Good manufacturing practices (GMP)
    - Good distribution practices (GDP)
    - Good prescription practices ...
GMP legislation

• The EU(EEA) Regulatory Framework
  – Areas for Veterinary Legislation:
    • Veterinary Medicinal Products: GMP
    • Veterinary Medicinal Products: GMP

Volume 4 EUDRALEX: Good manufacturing practice (GMP) Guidelines. (near 200 pages)


- Quality management
- Personnel
- Premises and equipment
- Documentation
- Production
- Quality control
- Work contracted out
- Complaints and product recall
- Self inspection
• The **Pharmaceutical Inspection Co-operation Scheme** is an international instrument between countries and pharmaceutical inspection authorities, which provide together an active and constructive co-operation in the field of GMP.

• PIC/S' mission is "to lead the international development, implementation and maintenance of harmonised Good Manufacturing Practice (GMP) standards and quality systems of inspectorates in the field of medicinal products."

**46 Participating Authorities** in PIC/S:
China taipei, Hong Kong, Indonesia, Japan, Korea, Malaysia, Singapore

http://picscheme.org/
GMP: On going work at the OIE level

Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2015

Summary

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**GMP Requirements**

**Target/activity?**

- Manufacturing sites for
  - Pharmaceutical products
  - Medicinal products for clinical trials
- Also, manufacturing sites for
  - Actives ingredients
  - Autogenous-vaccines
  - Premixes for Medicated feeding stuff
  - Herbal products
  - Homeopathic medicines
- And contract company providing
  - Transport, quality control
GMP Requirements

Target/product?

• Range of products
  – Sterile
  – Non sterile
  – Biologic
  – Chemical
  – Tablets, oral powder
  – …

Not covered: medical device, reagents, biocides and veterinary food additives
Good Distribution practices (GDP)

Target/activity?

- MAH and distributors
  - Recall and complaints
  - Quality product review
  - Storage condition: cold chain for vaccines
  - Traceability
Surveillance

- Legal Market
- Counterfeit products
Legal Market

Surveillance of the Legal Market

Elaborate a programme of surveillance with a risk analysis and in cooperation with all competent services

Risk based programme

Examples:

• Products used for food producing animals
• Focus on antibiotics and antiparasitics
• Products that present a risk for the users (vet, farmers, etc.)
• Biologicals involved in the control of zoonosis
• Biologicals involved in the control of regulated diseases
• Live vaccines

...
Inspection and control

VMPs
Importers

VMPs
Manufacturer

GDP

GMP

Wholesale:

Retailer
veterinarians
Pharmacist
others

Sampling

Quality Control

Farm

Control of:
- Conditions of manufacturing
- Traceability
- Conditions of Storage
- Conditions of deliverance
- List of VMPs (only VMPs authorised)
Sampling

• Done by inspectorates (in wholesalers but also anywhere on the market)

Testing

• Qualitative and quantitative analysis: Active ingredient content most often by HPLC (High performance Liquid Chromatography)
• Efficacy for vaccines
• Accredited laboratory or international recognition (OIE Ref. Lab)
Counterfeit products

• Copy of Authorised products
  – Modification of qualitative or quantitative active ingredients
  – Differences in the labelling

• Need for National, Regional and international cooperation

• Internet sales (a concern)
Counterfeit products

<table>
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<th>Výrobca a názov vakcíny</th>
<th>Číslo šarže</th>
<th>1 Dátum vakcinácie</th>
<th>2 Platnosť do</th>
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<td>Manufacturer &amp; Name of Vaccine</td>
<td>Batch Number</td>
<td>Vaccination Date</td>
<td>Valid until</td>
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<tr>
<td>Rabisin</td>
<td>25/02/2011</td>
<td>1 3 1 AUG. 2011</td>
<td>2</td>
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Quality Control Laboratory

- Need for laboratory capacities to identify, analyse counterfeit products

RAMAN SPECTROMETER
At farm level

- Inspectors should verify
  
  • The absence of counterfeits or unauthorised products
  
  • The conditions of storage
  
  • The record keeping
  
  • The respect of the prescription rules
  
  • The compliance with the prescription
  
  • Veterinary medicinal products administered to the animals, dates of administration and respect of withdrawal periods
Conclusion

• Ensuring quality of Veterinary medicinal products is essential.

• Appropriate legislation and Staff (trained inspectors, laboratory capacities) are needed.
  – Efficient systems of Authorisation (VMP and companies)
  – Transparency and communication
  – Efficient Inspectorate body with appropriate power.
  – The possibility to survey both the legal and illegal market

are essential as well as:

The capacity of prosecution and recalling products.
Thank you for your attention

Organisation mondiale
de la santé animale

World Organisation
for Animal Health

Organización Mundial
de Sanidad Animal