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**Diagnostic techniques for sheep pox and goat pox**

绵羊痘和山羊痘诊断技术

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## Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents"

Drafting is required.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the Ministry of Agriculture and Rural Affairs of the People's Republic of China.

This document is under the jurisdiction of the National Technical Committee on Animal Health Standardization (SAC/TC 181).

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## Introduction

Sheep pox and goat pox (hereafter referred to as sheep pox) are caused by sheep pox virus (SPV) and goat pox virus (GPV), respectively.

Goatpox virus (GPV) is the cause of the disease. Both sheeppox virus and goatpox virus belong to the Poxviridae family, vertebrate poxviruses Subfamily (Chordopoxviridae), Capripoxvirus (CaPV). China classifies it as a Category II animal epidemic disease.

It is also a disease listed by the World Organization for Animal Health (WOAH). Infected animals show fever, widespread papules on the skin, mucous membranes, and organ surfaces.

Rash or nodules, skin edema, swollen lymph nodes, weight loss, a significant decrease in milk production, and in severe cases, death. Goat pox was first reported in BC Sheeppox was first discovered in England in the 13th century, with an incidence of 50% to 80% and a mortality rate of 20% to 80%.

The mortality rate of sheep can reach 100%. There are reports of sheep pox outbreaks and epidemics in countries around the world. Currently, it is common in northern Africa, the Middle East, and parts of Asia.

Sheep pox is a major obstacle to the introduction of valuable sheep and goat breeds and large-scale sheep farming, and it poses a serious threat to The clinical symptoms of sheep pox are easily confused with sheep pseudotuberculosis and sheep infectious pustule, and laboratory differential diagnosis is required.

This document refers to the relevant contents of the Handbook of Terrestrial Animal Diagnostic Tests and Vaccines (WOAH), and the technical methods are consistent with those recommended by WOAH.

The standard method is consistent.

Sheeppox and goatpox diagnostic techniques

## 1 Scope

This document describes the clinical diagnosis, virus isolation and identification, PCR detection, real-time PCR detection, Diagnostic methods such as LAMP assay, virus neutralization test, ELISA, etc.

This document applies to the clinical diagnosis, laboratory testing, epidemiological investigation and inspection and quarantine of sheeppox.

## 2 Normative references

GB 19489

### 3 Terms and definitions

There are no terms or definitions that require definition in this document.

### 4 Abbreviations

The following abbreviations apply to this document. CaPV. capripoxvirus CPE. cytopathic effect Ct value. cycle threshold DNA. deoxyribonucleic acid EDTA. ethylene diamine tetraacetic acid ELISA. enzyme linked immunosorbent assay LAMP. loop-mediated isothermal amplification MEM. minimum essential medium OD. optical density PBS. phosphate buffer saline PCR. polymerase chain reaction Taq. Thermus aquaticus TCID<sub>50</sub>.50% tissue culture infective dose

#### 5.1.1 Susceptible animals

Sheep and goats of different breeds, genders and ages are susceptible, lambs are more susceptible than adult sheep, and other livestock are rarely infected.