

ICS 65.020.30
CCS B 41

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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

SN/T 5183-2020

Technical specifications for quarantine of cowhide myiasis

牛皮蝇蛆病检疫技术规范

(English Translation)

Issued on: December 30, 2020

Implemented on: July 1, 2021

Issued by: General Administration of Customs

Table of Contents

Foreword	
1 Scope	
2 Normative references	
3 Terms and definitions	
4 Overview of the disease	
5 Materials and reagents	
6 Equipment	
7 Clinical Symptom Check	
7.1 Scope of application	
7.2 Clinical symptoms	
8 Necropsy and morphological identification	
8.1 Scope of application	
8.2 Necropsy	
8.3 Morphological identification	
9 Enzyme-linked immunosorbent test (ELISA)	
9.1 Scope of application	
9.2 Collection and processing of serum samples	
9.3 Operation steps	
9.4 Calculation of results	
9.5 Judgment of results	
10 Comprehensive judgment of results	

Foreword

This document is drafted in accordance with GB/T 1.1-2020.

This document was proposed and managed by the General Administration of Customs of the People's Republic of China.

Drafting organizations of this document. Chinese Academy of Inspection and Quarantine, Urumqi Customs, People's Republic of China, People's Republic of China Guangzhou Customs.

1 Scope

This document stipulates the clinical symptom examination, necropsy examination, pathogen morphology identification and enzyme-linked immunosorbent assay during the quarantine of bovine myiasis.

Attached are technical specifications such as ELISA.

This document is applicable to the quarantine of live cattle and cowhide fly maggots in the entry and exit of the country, and also applies to the epidemic disease of cowhide fly maggots in cattle breeding farms.

Scientific investigation and monitoring.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations Only the version corresponding to that date is applicable to this document; for undated references, the latest version (including all amendments) is applicable Used in this document.

GB/T 6682 Analytical laboratory water specifications and test methods

3 Terms and definitions

There are no terms and definitions that need to be defined in this document.

4 Overview of the disease

Bovine hypodermosis (Bovine hypodermosis) is caused by the hides of Hypodermine and Hypoderma.

Flies (*H.bovis*), striped flies (*H.lineatum*) and Chinese skin flies (*H.sinense*) are parasitic in the yak or cattle.

Insect disease. The main hazards of this disease are the perforation of the cowhide, the reduction of meat and milk production and quality, and the high intensity of infection can cause animal death.

The reported pathogens of cowhide myiasis belong to 39 species in 10 genera. The specific hosts are cattle, yaks, and cattle of the genus Bovine.

Cattle and buffalo, but sometimes can also infect horses and other domestic animals and humans, and can mature. In view of the serious harm of this disease to the animal husbandry, Many countries in the world initiated the control and eradication of skin myiasis in the 1920s and 1930s, and implemented legislation to eliminate skin myiasis.

Mandatory. Skin myiasis is prevalent in a wide range, and the disease is prevalent in 55 countries within the range of 18° to 60° north latitude. Mycosphagidae the geographical distribution of maggot disease is mainly in the agricultural and pastoral areas of Northeast, North China, Northwest and other regions. The cowhide myiasis is particularly serious in these agricultural and pastoral areas. In the stream the infection rate is over 80% in the walking area, and 98%-100% in severely infected areas, especially calves aged 1 to 3 years old are susceptible to infection.

The incidence of the above cattle is reduced.

5 Materials and reagents

Unless otherwise specified, the chemical reagents used are of analytical grade. The test water should meet the requirements of Grade 1 water in GB/T 6682.

Bovine Hypodermosis Antibody Test Kit. This standard uses the commercial kit Bovine Hypodermosis Antibody Test Kit as an example for operation, other ELISA test kits for bovine myiasis that have been validated and tested with reliable results can also be used.

6 Equipment

6.1

Stereo microscope.

6.2

Microplate reader.

6.3 -20 °C ordinary refrigerator, 4 °C refrigerator.

6.4

Autoclave.

6.5

Centrifuge tube, micropipette and matching tips, glass petri dishes and dissecting needles.

6.6

Constant temperature incubator.

7.1 Scope of application

It is suitable for the quarantine of live cattle infected with bovine fly maggots during the entry and exit quarantine period.

7.2 Clinical symptoms

After cows are infected with skin flies, they generally do not show obvious clinical symptoms, but when they are severely infected, the young animals show weight loss, slow growth, and poverty.

Blood, the cow's milk production decreases, and the draught animal's ability to work is reduced. When the skin fly larva penetrates the brain, it can cause neurological symptoms, such as Retreat movement, sudden fall to the ground, paralysis or fainting, etc., severe cases can cause death. In addition, due to the formation of perforations in the skin of the third stage larvae, Bacterial infection causes suppuration and forms a fistula, often with pus and serous outflow, and the fistula gradually heals and forms a scar. But the above symptoms can only as a reference indicator of skin fly infection, it cannot be used as a basis for diagnosis. Only if tumor-like bumps and subcutaneous cellulite are found on the back of the cow the diagnosis can only be confirmed when the third stage larvae can be squeezed out.

8.1 Scope of application

It is suitable for the diagnosis of the condition of dead cattle, and also for the quarantine of inbound and outbound cowhide sheets.

8.2 Necropsy

Focus on inspection of esophageal mucosa, back subcutaneous, rumen serosa, omentum, esophageal serosa and other parts. Three-stage larvae cause skin swelling in animals from a tumor-like mass. There are small holes in the animal's bulge, and dry pus scabs are common around the holes, and larvae can be seen in the hoof knot tissue sacs in the holes. As found in the third period the larvae can be diagnosed. Take the suspicious cowhide fly maggot body, place it in a glass petri dish, turn the body with the aid of a dissecting needle, under a stereo microscope Observe whether it has relevant morphological characteristics.

8.3.1 Morphology of the second stage larva

It is pale yellowish white, 11 mm to 15 mm long and 3 mm to 6 mm wide. The ventral surface is slightly protruding, and the back is flat. The appearance of the mouth hook is not obvious, only seen Two small yellow-brown dots are separated from each other. The spines on the front and back edges of the ventral sections are not clearly demarcated, and the air valve does not form a kidney shape, resembling a granular pomegranate.

Stacked arrangement.