

**Inner Mongolia JiShuo Technology Co. LTD.**

# **Specification of sheep rumen capsules**

Rev: specification of sheep rumen  
capsule \_V2.1.

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## Text revision record

version	time	describe	Modifier
V1.0	2022-9-2	New Document	Chen weiqi
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## 1. summary

Bovine rumen capsule is a kind of safe and environmentally-friendly material, which is composed of circuit board, chip, sensor, battery and other components. It is a cylindrical high-performance long-period biological feature collection device. In the health management system and management method of ruminants, it adopts the way of staying in rumen to collect the physiological data of ruminants, which can enable farmers to grasp the real-time physiological data of each animal in real time, and realize abnormal warning according to the data comparison function. It can control the health status of livestock in time, manage livestock with diseases and estrus in time, and avoid economic losses. Lora technology is adopted in communication, which can achieve ultra-low power consumption and have a working life of two to three years.

### product function

Real-time

estrus

monitoring,

real-time

pregnancy

monitoring,

calving

monitoring,

health

monitoring,

abnormal state

alarm, typical

application

- ✓ Large-scale and intensive monitoring and management of pasture
- ✓ Financial insurance (living loan insurance business)
- ✓ Brand building of mutton and milk enterprises
- ✓ Feed Company (Formula Optimization)
- ✓ Veterinary medicine (disease prevention and control), veterinary medicine (specific medicine)
- ✓ Seed company (excellent breeding)
- ✓ Scientific research institutes (scientific research)
- ✓ Government departments (market regulation and supervision)

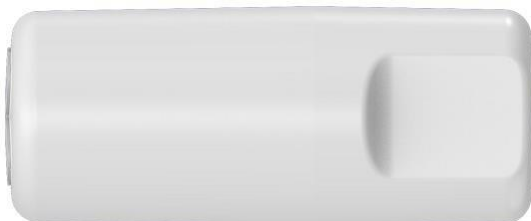
### Product model list of sheep rumen capsule

serian	model	Describe	remarknumber
1	JS-0050	51*21mm service life is 3 years.	

## 2. product features

- ✓ Collect and record accurate and reliable data in sheep stomach in real time.
- ✓ Completely traceable and comparable
- ✓ Traceable drinking behavior and calving status
- ✓ The body temperature can be continuously measured without being affected by the external environment.
- ✓ The scientific shape design makes the capsule easy to be put into sheep rumen without rejection.
- ✓ The special shell material ensures that it will not be corroded and cracked in the rumen of sheep.
- ✓ Anti-ultraviolet and anti-impact

## 3. Product appearance



## 4. Technical specification parameters

project	Specification/Function Description
Communication mode	LoRaWAN
Supported frequency band	902.3 Mhz ~914.9 Mhz
LoRa output power	Type (SF9) : 15dBm@915MHz; 15dBm@914.9MHz
Communication distance	500 meters away from the gateway after being put into rumen (no interference in the open environment)
Temperature sampling accuracy	+/-0.1 C to monitor the ambient temperature in rumen.
Motion sensor	Monitoring rumen movement state
Data upload frequency	Set as required (30 minutes)
operational current	Static: 15uA, average: 35uA/h
Average power consumption	< 3.3mW
battery	3V 1000 mAh
working hours	2 to 3 years
Waterproof grade	IP68
Working temperature	-40 ~ 65 C (working temperature, working frequency can be uploaded according to set conditions)
Monitor temperature	Accuracy (+/-0.1 C) of 23 ~ 45 C (working temperature in rumen, which can work according to normal data uploading frequency)
Storage temperature	-40 C ~ 21 C (optimal storage temperature outside rumen, which can enter power-saving mode)
measure	51*21mm
weight	40g
package	20 PCs/box, 400 PCs/box.

## 5 Operation instruction

### 5.1 Storage requirements

Store in an environment with a temperature of -40 C ~ 20 C.



## 5.2 Preparation of sheep rumen capsules

- 1) LORA gateway (prepare the corresponding number and plan the layout according to the range where the sheep are put).
- 2) Telephone network cards/cables (prepare network cards/broadband according to the number of gateways).
- 3) Rumen capsules (prepared according to the planned quantity, and tested online in the company in advance).
- 4) Capsule dispenser (at least 2 pieces).
- 5) Two veterinarians from the pasture are needed for the personnel to be put in.
- 6) Communicate with the pasture in advance to determine the sheep to be released, and it is best to put the sheep in a shed for later management. Create a ranch account in advance.

## 5.3 Release sheep rumen capsule

- 1) Equipment in place: capsule, gateway, screwdriver, feeding gun, alcohol, disinfection equipment, disposable gloves, protective clothing, capsule delivery registration form, pen (spare as appropriate).
- 2) Personnel in place: 2 veterinarians and 1-2 recording personnel.
- 3) Set up the gateway according to the planned layout.
- 4) Start feeding, and disinfect each capsule of the feeding gun to avoid cross infection.
- 5) Log in to the account of the ranch administrator with a mobile phone, and add and save the sheep ear number corresponding to the two-dimensional code identification number of the capsule through the APP to realize the one-to-one correspondence between the sheep and the capsule.
- 6) , put the capsule and the sheep's ear number to take photos, which is convenient for later verification.
- 7) Confirm that the number of capsules released is consistent with the number of sheep, check whether the number of capsules on the health management platform is normal or not, and confirm that the release is completed.

## 6. package

product name	type	quantity	measure	carton size	Outer box quantity	weight
Sheep rumen capsule JS-0050	Outer box Sheep Rumen Capsule	20 PCs/box	311*208*26 mm	32.6*22.3*30cm	400 PCs/box	20kg

## 7. contact us

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### FCC Warning:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.