Inner Mongolia jishuo technology co., 1td

Specification of bovine rumen capsule

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V1. 0. 0	2021-07-2	carate document	
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1. Overview

The rumen capsule is a safeand environmentally friendly material designed and composed of circuit boards, chips, sensors, batteries and other components. It is a cylindrical high-performancelong-term biometric acquisition equipment which remain in the rumen in all its life. The bio-capsule collect physiological data of cattles in real time, these data will be processed by our Al algorithm and provide different alert like disease, estrus, calving etc. So as to decrease the economic loss and enhance the output of cows milk production The bio-capsuleuses Lora communication technology which is ultra-low power consumption. Its longevity is three to five years.

product function

Heating monitoring

Pregnancy monitorin,

Calving Prediction

Health monitoring,

Abnormal alert

Typical

Application

/Large-scale pastures management

/Financial insurance (living loan insurance business)

/Beef and milk enterprise brand building

/Feed company (Formula optimization)

/Veterinary (diseaseprevention and control), veterinary medicine (special medicine)

/Breedingcompany

/ResearchInstitute (Scientific Research)

Rumen capsule model lists:

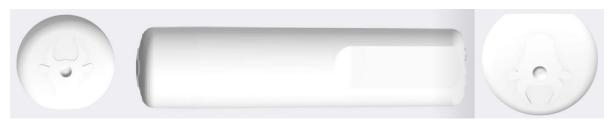
seria	model	describe	remarks
1	JS-0130	130.5*32mm service life of 5 years	
2	JS-0103	103.5*28.5mm service life of 3 years	

2. product features

- ✓ Collect accurate biologicaldata of cattles
- ✓ Fully traceable and comparable
- ✓ Traceable drinking behaviorand calving status
- ✓ Continuously measure innerbody temperature without external environment affected
- ✓ Easy injection into the rumen with scientific shape
- ✓ Corrosion free with the special shell material.
- ✓ UV-resistant,impact-resistant

3. Product appearance





4. Technical specification parameters

project	Specification/function description
Communication mode	LoRaWAN
Supportable frequency band	915 Mhz
LoRa output power	Type (SF9): 16.30dBm@915MHz;
Communication distance	After being put into the rumen, the farthest distance from the gateway is200- 500m
(without interference in the Temperature sampling accura	e open environment). Cy +/-0.1 C to monitor the internal environment temperature of rumen
Motion sensor	Monitor rumen peristalsis state
Data upload fre	quency Set as required (15 minutes)
Operating current	quiescent 22uA average:65uA/h
Average power consumption	< 3.3mW

Working temperature	23~45 °C (Working temperature in rumen ,It can work according to the normal data upload frequency)
Storage temperature	-40 ° C~22 ° C (Optimum storage temperature outside rumen ,Power saving mode)
measure	JS-0130: 130.5*32mm/ JS-0103: 103.5*28.5mm
weight	120g-200g
	Comply with RoHs and GB4806.7 (national food safety standard plastic materials and products for food contact)

5 Operating instructions

5.1 Storage requirements

Store in an environmentwith a temperature of -40 $^{\circ}$ C~24 $^{\circ}$ C

Do not open the sealed bottle cap before using





5.2 Preparation of bovine rumen capsule

- 1) LORA gateway (prepare the corresponding quantity according to the range and layout).
 - 2) SIM card/cable (numbers equal to gateways).
- 3) Rumen capsules (prepared according to the planned quantity and do online testing in the compa ny in advance).
- 4) Capsule gun (no less than two).
- 5) Two veterinarians
 - 6) Communicate with ranch to determine the cattles in advance, It is best to place the confirmed cattle in a shed, which is convenient for later management

5.3 Inject rumen capsule

- 1) Equipment in place: capsules, gateways, screwdrivers, feeding guns, alcohol, disinfection equipment, disposable gloves, protective clothing, capsule delivery registration form, pens (as appropriate).
 - 2) Personnel in place: 2 veterinarians and 1-2 recorders. personnel
- 3) Set up the gateway according to the planned layout.
- 4) Sterilize the balling gun after .every injection to avoid the cross infection.
- 5) Log in to the the ranch administrator account with your mobile phone, and scan the QR code of the bio-capsule through the APP to add and save the identification number corresponding to the ear number of the cow, so as to realize the one-to-one correspondence between cows and capsules.
- 6) Take photos of bio-capsules with the numbers of cattle of cattle ear for later verification.
- 7) Confirm that the number of bio-capsules to be injection is the same as the number of cattle ,check the number of capsules on the health management platform and whether they are normal,and confirm that the injection is completed.

6. package

Name	Туре	Quantity	Dimension	Carton size	Carton quantity
rumen capsule JS0130	Sealed bottle +equipment	1 /1	Length 140* Diameter 40(mm)	36.9*33*18 .9(cm)	30 pcs/carton
rumen capsule JS-0103	Sealed bottle +equipment	1 /1	Length 120 * diameter 40(mm	a) 36.5*32.2* 27(cm)	60 pcs/carton

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.