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UC DAVIS VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory
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CAHFS Accession #: D1810492

FINAL REPORT

Ref.#: Cow #540

Coordinator: Robert Poppenga, DVM, PhD, Dipl. ABVT

E-Signed and Authorized by: Poppenga, Robert H. on 8/10/2018 3:53:20PM

Email To:

O'Connor, Richard
rkojaml@gmail.com

Collection Site:

Cascade Hutterite Colony
box 508/Birdtail Creek Rd,
Sun River MT 59483
Cascade County

This report supersedes all previous reports for this case

Specimens Received: 1 Blood;

Date Collected: 07/17/2018 **Date Received:** 08/10/2018

Comments: 1-blood in syring w/needle

Case Contacts

Submitter	O'Connor, Richard	406-461-2823	Pmb 2046/1 Jackson Creek Rd	Clancy	MT	59634
Owner	Cascade Hutterite Colony	406-264-5364	Box 508/Birdtail Creek Rd	Sun River	MT	59483

Specimen Details

Animal/Source	ID Type	Taxonomy	Gender	Age
1 Cow # 540	Unknown	Angus Cattle	Female	8.00 Years

Case Summary

Note the negative cyanide results. The detected copper concentration is within an expected range.

No toxic compounds were detected on the submitted specimen by our gas chromatography - mass spectrometry (GC/MS) and liquid chromatography - mass spectrometry organic chemical screens. The screens are designed to potentially detect a large number of organic compounds belonging to diverse chemical classes (pesticides, environmental contaminants, drugs and natural products). Control matrices were obtained to compare analytical results with those obtained from the submitted specimen.

Within the limits of the samples tested and the analytical procedures performed, chemical contamination of the submitted specimens was not evident.

Clinical History

Duration of Illness: 24 hrs.

Eight-year-old Angus cow discovered dead in fenced pasture at 1 PM Tuesday, 7/17. Last seen alive and well at 10 AM 7/16. A vet was not consulted and no formal necropsy was performed. A MT DOL inspector was called and he personally inspected the animal, took a number of photos, and obtained the blood sample I am sending, as well as some samples of hide that I have in possession (frozen). He froze the blood sample soon after it was collected. MT DOL inspector could not determine the cause of death. This appears to be a case of "cattle mutilation". I am a retired anesthesiologist (trained at UC Davis Sacramento) and I have an interest in trying to determine how this cow was captured in the field and subjected to VERY invasive excisions of facial, mandible, and peri-rectal hide and the underlying muscle tissues. The animal was severely bloated when discovered and spontaneously exploded while the MT DOL inspector was still at the scene. I am looking for an explanation of what killed this cow, and how that was accomplished.

Due to extreme "bloating" and sudden death of this animal, I am interested in r/o anthrax.

With GC/MS I am looking for any drug or substance that could have been used to subdue this animal in the field (alpha-2

adrenergics, narcotics, benzodiazepines, barbiturates etc.).

The cyanide test is requested to r/o cyanide poisoning, realizing this is a long shot but should be done to cover all bases.

The serum copper is requested due to one report of depleted serum copper in a similarly mutilated cow from years ago.

This "cattle mutilation" phenomenon is ongoing here in Montana (I saw another one of these in Teton County on a mature Angus bull about a year ago) and these have also been reported in Colorado, New Mexico, Missouri, and even Argentina.

The excisions on these animals are surgical in appearance and definitely not the work of scavengers or predators. I can send photos if anyone there is interested. RKO.

(Additional letter attached to submission form from Richard O'Connor, M.D.)

Bacteriology

ANTHRAX CULTURE

Animal/Source	Specimen	Specimen Type	Results
1 Cow # 540	(1) Cow # 540	Blood	No Bacillus anthracis detected

CAPSULE STAIN - MFAYDEAN

Animal/Source	Specimen	Specimen Type	Results
1 Cow # 540	(1) Cow # 540	Blood	No encapsulated bacilli detected

GRAM STAIN

Animal/Source	Specimen	Specimen Type	Results
1 Cow # 540	(1) Cow # 540	Blood	Large Gram-positive rods

Select Agent Screening Sample Prep

Animal/Source	Specimen	Specimen Type	Results
1 Cow # 540	(1) Cow # 540	Blood	Done

Toxicology

Reporting Limit (Rep. Limit): The lowest routinely quantified concentration of an analyte in a sample. The analyte may be detected, but not quantified, at concentrations below the reporting limit. Sample volumes less than requested might result in reporting limits that are higher than those listed.

CYANIDE (DISTILLATION)

Animal/Source	Specimen	Specimen Type	Results	Units	Rep. Limit
1 Cow # 540	(1) Cow # 540	Blood	Not Detected	ppm	0.1

GCMS Screen

Animal/Source	Specimen	Specimen Type
1 Cow # 540	(1) Cow # 540	Blood

Analyte	Result	Units	Rep. Limit	Units
Negative	See comment under Toxicology	NA	NA	NA

LCMS Screen

Animal/Source	Specimen	Specimen Type
1 Cow # 540	(1) Cow # 540	Blood

Analyte	Result	Units	Rep. Limit	Units
Negative	See comment under Toxicology	NA	NA	NA

TRACE ELEMENT SCREEN

Animal/Source	Specimen Type	Date Resulted	Sp.
Cow # 540	Blood	07-Aug-2018	BO

Analyte	Calcium	Copper	Iron	Magnesium	Phosphorus	Potassium	Sodium	Zinc
Ref. Range								
Rep. Limit	4	0.05	0.1	1	2	0.1	5	0.1
Units	PPM	PPM	PPM	PPM	PPM	mEq/L	mEq/L	PPM
Specimen:	Result:	Result:	Result:	Result:	Result:	Result:	Result:	Result:
Cow # 540	51	1.4	10	80	950	46	77.7	4.9