Press Release on behalf of: Flora & Fauna of Aotearoa, Incorporated Society 2735472
www.floraandfaunaaotearoa.co.nz
Clean Green New Zealand Trust Registered Charity CC54185. https://cleangreennz.wordpress.com/

Independent Testing Shows Wildlife Poisoned by 1080 (Sodium Monofluoroacetate)

Two non-profit environmental groups in New Zealand have today published independent test results indicating that 1080 poison was the likely cause of death at an environmental catastrophe in Westport, New Zealand. On November 9th, 2019, one week after a Department of Conservation (DoC) aerial 1080 poison operation 140 kms upstream, dead wildlife washed down the flooded Buller River. Hundreds of potentially toxic carcasses of rats, a goat, birds and numerous aquatic species were strewn across the public beach at Westport.

The full results of tests undertaken by an independent laboratory[1], using the latest methodology[2] and equipment, include samples taken from 5 rats, 1 weka, 2 shearwaters, 1 starfish and 6 mussels. The samples from 4 of the 5 rats tested positive for three chemical markers of 1080 poison, including the toxic chemical, fluorocitrate. This was also the case for both the shearwater birds. The starfish and weka also tested positive for fluorocitrate. There were no traces of 1080 detected in the mussels. The tests included stomach and intestines of samples extracted from carcasses collected from the beach and Buller River by volunteers. For the security and safety of the independent chemists involved, the identity of the laboratory has been withheld.

These findings contradict claims by DoC on Wednesday, which stated 1080 was not found in any of the wildlife tested. This raises serious questions about the methodology employed by the laboratories commissioned to undertake DoC's testing. It appears from their lab reports (published on DoC's website) that the samples were only tested for the presence of the active ingredient, fluoroacetate. But as Prof Shaw, toxicologist from the University of Canterbury pointed out, because of the delay in testing this would have already been broken down into other substances, for example, fluorocitrate. Scientifically valid toxicological testing requires the most up-to-date, and accurate methods to be used, and in the case of testing for 1080, that means analysis of the metabolic chemical markers of the poison from a variety of sources within the carcass. There are other serious discrepancies in DoC's claims and associated toxicology reports. The number of rats tested is inconsistent, and in the pathology report of the weka it was noted "both lungs exuding frothy pink fluid", a common symptom in animals that have been victims of 1080 poisoning.

The full results of these independent tests will be made publicly available on Flora and Fauna of Aotearoa's website and copies sent to relevant government agencies and MPs. Flora and Fauna of Aotearoa and Clean Green NZ Trust, along with their volunteer supporters and many thousands of concerned New Zealand citizens, are calling on the government to act now to protect public health by initiating an immediate independent investigation into this tragic incident and stopping all aerial 1080 poison operations before more wildlife are harmed.

[1] Accredited with ISO9001; 17025; 27000 QMS

[2] Methodology is based upon the Pitt protocol (2015): biological material was removed from the frozen carcass, then an accurately weighed portion was homogenized using a polytron 3000 into extraction solvent. This solvent liquor was then cleaned-up and the cleaned pregnant solvent analyzed using HPLC with both Time of Flight, linear ion trap mass spectroscopy and fluorescence to check against standards containing fluoroacetate and fluorocitrate. The method was checked for repeatability and linearity. FT-IR and Raman were used to check for the presence of green dye acid 9, as that is only used in the bait pellets and is not a naturally occurring substance at detectable limits. Complete and robust Chain of Custody with SoPs available upon request.

Note to Journalists: Sodium Monofluoroacetate (Compound 1080) is a highly toxic, inhumane, synthetic metabolic poison. It has no antidote. It is banned in many countries. The sublethal effects of the poison on humans are unknown, however it's a proven endocrine disruptor and impacts upon the body's major organs. It is manufactured in the USA by Tull Chemicals and transported to New Zealand's two Government-funded poison bait factories, where it is mixed with cereal or other substances perceived to be attractive to 'pest' species (e.g. rats and possums). Tonnes of poison baits are regularly and systematically distributed via helicopters over thousands of hectares of New Zealand's land and waterways – including drinking water catchments. For over 65 years of this practice New Zealanders have voiced their increasing concern about the negative impact of this indiscriminate poisoning, not only on wildlife, but on public health too, from contamination of the food chain. To date, there has been no independent studies of the claimed 'effectiveness' of this policy and no epidemiological research has been undertaken.

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 191115-3A SAMPLE TYPE RAT

DATE OF SAMPLE RECEIPT 15-11-19

DATE OF SAMPLE EXTRACTION 16-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN, REFRIGERATED

PORTION OF SAMPLE TO BE EXTRACTED STOMACH

WEIGHT OF SAMPLE USED IN EXTRACTION 10-114g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/N

EXTERNAL STANDARD Y/N TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

FLUOROACETATE 38 ppm

FLUOROCITRATE 415 ppm

FT-IR + RAMAN SHOWED GREEN TRIARYL DYE

Technician [redacted] Supervisor [redacted] 18-11-19.

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 191115A SAMPLE TYPE RAT

DATE OF SAMPLE RECEIPT 15-11-19

DATE OF SAMPLE EXTRACTION 16-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN, REFRIGERATED

PORTION OF SAMPLE TO BE EXTRACTED INTESTINES

WEIGHT OF SAMPLE USED IN EXTRACTION 6.319g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/N

EXTERNAL STANDARD Y/N TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

FLUOROACETATE	49 ppm
FLUOROCITRATE	370 ppm
FT-IR + RAMAN	SHOWED GREEN TRIARYL DYE.

Technician [redacted] Supervisor [redacted]

18-11-19.

Toxicology Submission Form

Date received:	Referral lab case ID#:	TOX CASE #:
20-11-19	191120-3	191115-D-E
Bill to:		
☐ Veterinarian	☐ Owner	☑ Other:

Species information						
☐ Bovine	☐ Canine	☐ Caprine	☐ Camelid	☐ Equine	☐ Feline	☑ Other:

Referral veterinarian:
Name:
Practice/Address:
Phone:
Fax:
E-mail:
Send report by: ☐ Mail ☐ Fax ☐ E-mail

Owner:
Name:
Address:
Phone:
Fax:
E-mail:
Send report by: ☐ Mail ☐ Fax ☑ E-mail

Animal identification		
# in group: 2	# affected:	# dead: 2

Animal ID/Name	Breed	Color	Sex	Age	Weight
SHEARWATER (1)	BIRD				
SHEARWATER (2)					

Reason for submission (History/Clinical signs/Laboratory results)

POSSIBLE BY KILL FROM SODIUM FLUOROACETATE DROP AS BAITS
COLLECTED ON 10TH 11 - 2019 FROM WESTPORT NORTH BEACH, FROZEN IMMEDIATELY.
RECEIVED FROZEN, BAGGED & LABELLED C.O.P.C. COMPLETED

Current treatment(s) (List drug, dosages and times for each medication):

N - A

SPECIMEN REQUIREMENT

: Red-top tubes	SST: Serum separator	G: Green top tubes (Heparin)	
3: Royal blue tubes	P: Purple top tubes (EDTA)		

TOXICOLOGY TESTS

nticoagulants
] Serum (SST, R) / Plasma (P, G) ☐ Liver
] Other: ☐ Bait
anel includes: Brodifacoum, Bromadiolone, Chlorphacinone, icoumarol, Difenacoum, Difethialone, Diphacinone

rsenic
] Whole blood (P, G) ☐ Kidney
] Liver ☐ Other:

flatoxins
] Corn ☐ Mixed Feed

arbiturates
] Serum (SST) / Plasma (P, G) ☐ Liver
] Other:

admium
] Serum (SST, R) ☐ Liver
] Other:

alcium
] Serum (SST, R) ☐ Liver
] Other:

-Carotene
] Serum (SST, R) ☐ Tissues:
] Feed: ☐ Other:

holinesterase
] Whole blood (G) ☐ Brain

hromium
] Serum (SST) ☐ Liver
] Other:

obalt
] Whole blood (P, G) ☐ Liver
] Other:

opper
] Serum (SST, R) ☐ Liver
] Liver (2-5 mg): ☐ Other:
] Copper biopsy

yanide
] Feed ☐ Plant
] Stomach content

thanol, methanol
] Whole blood

thylene glycol
] Whole blood ☐ Stomach content
] Kidney

ormaldehyde
] Stomach content ☐ Water
] Mud

ron
] Serum (SST, R) ☐ Liver
] Other:

GC-MS toxicant screen
☐ Serum (SST, R) / Plasma (P, G) ☑ Stomach content
☐ Liver ☑ Other: INTESTINES

Lead
☐ Whole blood (P, G) ☐ Liver
☐ Other:

Magnesium
☐ Serum (SST) ☐ Liver
☐ Other:

Manganese
☐ Serum (SST) ☐ Liver
☐ Other:

Metals & Minerals screen (ICP)
☐ Liver ☐ Feed
☑ Other:
Panel includes: As, Ca, Cu, Fe, Mg, Mo, P, Pb, Se. Zn

Methemoglobin
☐ Whole blood (P, G)

Molybdenum
☐ Whole blood (P, G) ☐ Liver
☐ Other:

Mycotoxin screen (Aflatoxin + Vomitoxin)
☐ Feed ☐ Other:

Nitrate/Nitrite
☐ Water ☐ Serum
☐ Ocular fluid ☐ Feed

Pesticides screen
☑ Stomach content ☐ Liver
☐ Feed ☐ Other:

Plant ID
☐ Plant ☐ Mushroom
☐ Other:

Selenium
☐ Whole blood (P, G) ☐ Feed
☐ Liver ☐ Other:

Strychnine
☐ Stomach content ☐ Urine
☐ Liver

Urea
☐ Feed ☐ Liquid supplement

Vitamin A
☐ Serum (SST, R) ☐ Feed
☐ Liver ☐ Other:

Vitamin E
☐ Serum (SST, R) ☐ Feed
☐ Liver ☐ Other:

Zinc
☐ Serum/ plasma (RB*) ☐ Liver
☐ Feed ☐ Other:

** In case of suspected zinc deficiency, royal blue tubes are required. If zinc toxicosis is suspected, then green top tubes and red top tubes can be used.*

Other analysis: HPLC MS/MS Post extraction
STOMACH + INTESTINES. SOP A21191

Specimen: _____

Sample submission information & laboratory policies

Submission Forms: Contact the Toxicology Laboratory or visit the Toxicology information page specifically, for information about the toxicology submission form, rates, and sample submission procedures. So that we may optimally assist you, please provide as much information as possible pertaining to history, clinical signs and any current treatment regimens. **The submission form should be placed in a SEPARATELY sealed bag accompanying the submitted sample(s).**

Prices: See Toxicology sample submission procedures & rates. All rates are subject to change without notice.

Submit all laboratory samples to:

Referral Service: If a test is not listed, please call the Toxicology Laboratory for availability. Several tests are not performed routinely by the Toxicology Laboratory. Samples received requesting tests that are run at outside laboratories will be forwarded to the appropriate lab for testing. Any additional costs associated with tests performed at outside laboratories are the responsibility of the submitting agent(s).

Turnaround time: For routine tests, 2 to 4 working days after the sample is received (Working Days=M-F, Day=8 am – 4 pm

Specimen: For the sample quantities and storage requirements, please refer to Toxicology sample submission procedures & rates web page. Each sample should be contained in two, separately sealed, leak proof plastic bags or plastic containers with an appropriate absorbent surrounding the containers in case of leakage of material during transport.

Sample types	Samples	Storage	Packaging/Shipment
Fresh tissue	Liver, Kidney, Fat; brain	NO FIXATION Refrigerate, freeze (ideally)	Secondary container/Overnight
GI content **Feed** **Baits**	Vomitus; Stomach/rumen/ abomasal/intestinal contents;	Refrigerate, freeze (ideally)	Secondary container/Overnight
	Feedstuffs/baits	Kept dry in plastic or paper bags (ideally)	Secondary container/Overnight/2 days
Fluids	Whole blood	Refrigerate	Secondary containers/Overnight
	Serum/Plasma; Ocular fluid, Urine; Water	Refrigerate, Freeze (ideally)	Secondary container/Overnight

Labeling Specimens: Clearly mark on each container the date the sample was collected, case number, the name of the submitting agency/Veterinary Hospital, the owner's name if applicable and the animal's identification or description of the environmental source of the sample material. Proper labeling eliminates the possibility of a specimen becoming separated from its submission form or being mistaken for another specimen. **In addition, please, clearly mark any specimens that are suspected of carrying zoonotic diseases that could be considered hazardous to human health.**

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 19 WIS 3E

SAMPLE TYPE SEAWATER WHOLE

DATE OF SAMPLE RECEIPT 20-11-19

DATE OF SAMPLE EXTRACTION 20-11-19

SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED STOMACH

WEIGHT OF SAMPLE USED IN EXTRACTION 11-14 1g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/N

EXTERNAL STANDARD Y/N

TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm

REPEATABILITY. 99.91%

RESULTS

FLUOROACETATE	19 ppm
FLUOROCITRATE	87 ppm
FT-IR + RAMAN	SHOWED PRESENCE OF TRIARYL DYE GREEN 9

Technician [redacted]

Supervisor [redacted]

21-11-19

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 19112035 SAMPLE TYPE SHEARWATER WHOLE

DATE OF SAMPLE RECEIPT 20-11-19

DATE OF SAMPLE EXTRACTION 20-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED STOMACH

WEIGHT OF SAMPLE USED IN EXTRACTION 11-189g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/N

EXTERNAL STANDARD Y/N TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

FLUOROACETATE 32 ppm

FLUOROCITRATE 118 ppm.

FT-IR + RAMAN showed green acyl dye

Technician [redacted] Supervisor [redacted]

21-11-19

Toxicology Submission Form

Date received:	Referral lab case ID#:	TOX CASE #:
20-11-19	191115-3	191115-3 F-6
Bill to:		
☐ Veterinarian	☐ Owner	☑ Other:

Species information						
☐ Bovine	☐ Canine	☐ Caprine	☐ Camelid	☐ Equine	☐ Feline	☑ Other:

Referral veterinarian:
Name:
Practice/Address:
Phone:
Fax:
E-mail:
Send report by: ☐ Mail ☐ Fax ☐ E-mail

Owner:
Name:
Address:
Phone:
Fax:
E-mail:
Send report by: ☐ Mail ☐ Fax ☑ E-mail

Animal identification		
# in group:	# affected:	# dead: 1 + 8

Animal ID/Name	Breed	Color	Sex	Age	Weight
STARFISH					
MUSSELS					

Reason for submission (History/Clinical signs/Laboratory results)

POSSIBLE CONTAMINATION FROM ASSOCIATED BY KILL
RESIDUES FROM SODIUM FLUOROACETATE POISONING
ITEMS COLLECTED 10TH 11 - 2019, BAGGED LABELLED + FROZEN
IMMEDIATELY.
COLLECTED AT WESTPORT NORTH BEACH
RECEIVED FROZEN BAGGED, LABELLED. CofC COMPLETED

Current treatment(s) (List drug, dosages and times for each medication):

N/A

SPECIMEN REQUIREMENT			
R: Red-top tubes	SST: Serum separator	G: Green top tubes (Heparin)	
RB: Royal blue tubes	P: Purple top tubes (EDTA)		

TOXICOLOGY TESTS

Anticoagulants
☐ Serum (SST, R) / Plasma (P, G) ☐ Liver
☐ Other: ☐ Bait
Panel includes: Brodifacoum, Bromadiolone, Chlorphacinone, Dicoumarol, Difenacoum, Difethialone, Diphacinone

Arsenic
☐ Whole blood (P, G) ☐ Kidney
☐ Liver ☐ Other:

Aflatoxins
☐ Corn ☐ Mixed Feed

Barbiturates
☐ Serum (SST) / Plasma (P, G) ☐ Liver
☐ Other:

Cadmium
☐ Serum (SST, R) ☐ Liver
☐ Other:

Calcium
☐ Serum (SST, R) ☐ Liver
☐ Other:

β-Carotene
☐ Serum (SST, R) ☐ Tissues:
☐ Feed: ☐ Other:

Cholinesterase
☐ Whole blood (G) ☐ Brain

Chromium
☐ Serum (SST) ☐ Liver
☐ Other:

Cobalt
☐ Whole blood (P, G) ☐ Liver
☐ Other:

Copper
☐ Serum (SST, R) ☐ Liver
☐ Liver (2-5 mg): ☐ Other:
☐ Copper biopsy

Cyanide
☐ Feed ☐ Plant
☐ Stomach content

Ethanol, methanol
☐ Whole blood

Ethylene glycol
☐ Whole blood ☐ Stomach content
☐ Kidney

Formaldehyde
☐ Stomach content ☐ Water
☐ Mud

Iron
☐ Serum (SST, R) ☐ Liver
☐ Other:

GC-MS toxicant screen
☐ Serum (SST, R) / Plasma (P, G) ☐ Stomach content
☐ Liver ☑ Other: BODY

Lead
☐ Whole blood (P, G) ☐ Liver
☐ Other:

Magnesium
☐ Serum (SST) ☐ Liver
☐ Other:

Manganese
☐ Serum (SST) ☐ Liver
☐ Other:

Metals & Minerals screen (ICP)
☐ Liver ☐ Feed
☑ Other: BODY
Panel includes: As, Ca, Cu, Fe, Mg, Mo, P, Pb, Se. Zn

Methemoglobin
☐ Whole blood (P, G)

Molybdenum
☐ Whole blood (P, G) ☐ Liver
☐ Other:

Mycotoxin screen (Aflatoxin + Vomitoxin)
☐ Feed ☐ Other:

Nitrate/Nitrite
☐ Water ☐ Serum
☐ Ocular fluid ☐ Feed

Pesticides screen
☐ Stomach content ☐ Liver
☐ Feed ☐ Other:

Plant ID
☐ Plant ☐ Mushroom
☐ Other:

Selenium
☐ Whole blood (P, G) ☐ Feed
☐ Liver ☐ Other:

Strychnine
☐ Stomach content ☐ Urine
☐ Liver

Urea
☐ Feed ☐ Liquid supplement

Vitamin A
☐ Serum (SST, R) ☐ Feed
☐ Liver ☐ Other:

Vitamin E
☐ Serum (SST, R) ☐ Feed
☐ Liver ☐ Other:

Zinc
☐ Serum/ plasma (RB*) ☐ Liver
☐ Feed ☐ Other:

Other analysis: HPLC MS/MS Post Extraction
BODY FLESH SOP 172+192.

Specimen: _____

_____

** In case of suspected zinc deficiency, royal blue tubes are required. If zinc toxicosis is suspected, then green top tubes and red top tubes can be used.*

Sample submission information & laboratory policies

Submission Forms: Contact the Toxicology Laboratory or visit the Toxicology information page specifically, for information about the toxicology submission form, rates, and sample submission procedures. So that we may optimally assist you, please provide as much information as possible pertaining to history, clinical signs and any current treatment regimens. **The submission form should be placed in a SEPARATELY sealed bag accompanying the submitted sample(s).**

Prices: See Toxicology sample submission procedures & rates. All rates are subject to change without notice.

Submit all laboratory samples to:

Referral Service: If a test is not listed, please call the Toxicology Laboratory for availability. Several tests are not performed routinely by the Toxicology Laboratory. Samples received requesting tests that are run at outside laboratories will be forwarded to the appropriate lab for testing. Any additional costs associated with tests performed at outside laboratories are the responsibility of the submitting agent(s).

Turnaround time: For routine tests, 2 to 4 working days after the sample is received (Working Days=M-F, Day=8 am – 4 pm

Specimen: For the sample quantities and storage requirements, please refer to Toxicology sample submission procedures & rates web page. Each sample should be contained in two, separately sealed, leak proof plastic bags or plastic containers with an appropriate absorbent surrounding the containers in case of leakage of material during transport.

Sample types	Samples	Storage	Packaging/Shipment
Fresh tissue	Liver, Kidney, Fat; brain	NO FIXATION Refrigerate, freeze (ideally)	Secondary container/Overnight
GI content **Feed** **Baits**	Vomitus; Stomach/rumen/ abomasal/intestinal contents;	Refrigerate, freeze (ideally)	Secondary container/Overnight
	Feedstuffs/baits	Kept dry in plastic or paper bags (ideally)	Secondary container/Overnight/2 days
Fluids	Whole blood	Refrigerate	Secondary containers/Overnight
	Serum/Plasma; Ocular fluid, Urine; Water	Refrigerate, Freeze (ideally)	Secondary container/Overnight

Labeling Specimens: Clearly mark on each container the date the sample was collected, case number, the name of the submitting agency/Veterinary Hospital, the owner's name if applicable and the animal's identification or description of the environmental source of the sample material. Proper labeling eliminates the possibility of a specimen becoming separated from its submission form or being mistaken for another specimen. **In addition, please, clearly mark any specimens that are suspected of carrying zoonotic diseases that could be considered hazardous to human health.**

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 191115JG. SAMPLE TYPE MUSSELS x6.

DATE OF SAMPLE RECEIPT 20-11-19

DATE OF SAMPLE EXTRACTION 20-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED FLESH

WEIGHT OF SAMPLE USED IN EXTRACTION 13-931g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/N

EXTERNAL STANDARD Y/N TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

NONE DETECTED

Technician [redacted] Supervisor [redacted]

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 1911153F SAMPLE TYPE STARFISH WHOLE

DATE OF SAMPLE RECEIPT 20-11-19

DATE OF SAMPLE EXTRACTION 20-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED BODY

WEIGHT OF SAMPLE USED IN EXTRACTION 19-316g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/N

EXTERNAL STANDARD Y/N ✓ TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

FLUOROCITRATE 13ppm

Technician [redacted] Supervisor [redacted]

21-11-19

Toxicology Submission Form

Date received:	Referral lab case ID#:	TOX CASE #:
20-11-19	191113-3	191113-3 H
Bill to:		
☐ Veterinarian	☐ Owner	☑ Other:

Species information						
☐ Bovine	☐ Canine	☐ Caprine	☐ Camelid	☐ Equine	☐ Feline	☐ Other:

Referral veterinarian:
Name:
Practice/Address:
Phone:
Fax:
E-mail:
Send report by: ☐ Mail ☐ Fax ☐ E-mail

Owner:
Name:
Address:
Phone:
Fax:
E-mail:
Send report by: ☐ Mail ☐ Fax ☑ E-mail

Animal identification		
# in group:	**# affected:**	**# dead:** 1

Animal ID/Name	Breed	Color	Sex	Age	Weight
WEKA (1)	WEKA				

Reason for submission (History/Clinical signs/Laboratory results)

POSSIBLE CONTAMINATION FROM BY KILL ASSOCIATED WITH SODIUM FLUOROACETATE POISON DROP.
ITEM COLLECTED 9TH 11-2019 EVENING - SEEN PECKING AT DEAD RATS ON BEACH BY RIVER. FOUND 1 HOUR LATER ON RIVER BANK
RECEIVED BAGGED, FROZEN LABELLED AND INTACT. CoFC COMPLETED

Current treatment(s) (List drug, dosages and times for each medication):

N-A

SPECIMEN REQUIREMENT

op tubes	SST: Serum separator	G: Green top tubes (Heparin)	
l blue tubes	P: Purple top tubes (EDTA)		

TOXICOLOGY TESTS

ulants
(SST, R) / Plasma (P, G) ☐ Liver ☐ Bait
:
ludes: Brodifacoum, Bromadiolone, Chlorphacinone, rol, Difenacoum, Difethialone, Diphacinone

e blood (P, G) ☐ Kidney ☐ Other:

ıs ☐ Mixed Feed

ates
(SST) / Plasma (P, G) ☐ Liver
:

n
(SST, R) ☐ Liver
:

(SST, R) ☐ Liver
:

ene
(SST, R) ☐ Tissues: ☐ Other:

terase
e blood (G) ☐ Brain

im
(SST) ☐ Liver
:

e blood (P, G) ☐ Liver
:

n (SST, R) ☐ Liver
(2-5 mg): ☐ Other:
er biopsy

☐ Plant
ach content

, methanol
e blood

e glycol
e blood ☐ Stomach content
y

lehyde
ach content ☐ Water

n (SST, R) ☐ Liver
r:

nalysis: HPLC MS/MS POST EXTRACTION
STOMACH + INTESTINES. SOP 172+191
n: ALL.

GC-MS toxicant screen
☐ Serum (SST, R) / Plasma (P, G) ☑ Stomach content
☐ Liver ☑ Other: INTESTINES

Lead
☐ Whole blood (P, G) ☐ Liver
☐ Other:

Magnesium
☐ Serum (SST) ☐ Liver
☐ Other:

Manganese
☐ Serum (SST) ☐ Liver
☐ Other:

Metals & Minerals screen (ICP)
☐ Liver ☐ Feed
☑ Other:
Panel includes: As, Ca, Cu, Fe, Mg, Mo, P, Pb, Se. Zn

Methemoglobin
☐ Whole blood (P, G)

Molybdenum
☐ Whole blood (P, G) ☐ Liver
☐ Other:

Mycotoxin screen (Aflatoxin + Vomitoxin)
☐ Feed ☐ Other:

Nitrate/Nitrite
☐ Water ☐ Serum
☐ Ocular fluid ☐ Feed

Pesticides screen
☑ Stomach content ☐ Liver
☐ Feed ☐ Other:

Plant ID
☐ Plant ☐ Mushroom
☐ Other:

Selenium
☐ Whole blood (P, G) ☐ Feed
☐ Liver ☐ Other:

Strychnine
☐ Stomach content ☐ Urine
☐ Liver

Urea
☐ Feed ☐ Liquid supplement

Vitamin A
☐ Serum (SST, R) ☐ Feed
☐ Liver ☐ Other:

Vitamin E
☐ Serum (SST, R) ☐ Feed
☐ Liver ☐ Other:

Zinc
☐ Serum/ plasma (RB*) ☐ Liver
☐ Feed ☐ Other:

** In case of suspected zinc deficiency, royal blue tubes are required. If zinc toxicosis is suspected, then green top tubes and red top tubes can be used.*

Sample submission information & laboratory policies

Submission Forms: Contact the Toxicology Laboratory or visit the Toxicology information page specifically, for information about the toxicology submission form, rates, and sample submission procedures. So that we may optimally assist you, please provide as much information as possible pertaining to history, clinical signs and any current treatment regimens. **The submission form should be placed in a SEPARATELY sealed bag accompanying the submitted sample(s).**

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Turnaround time: For routine tests, 2 to 4 working days after the sample is received (Working Days=M-F, Day=8 am – 4 pm

Specimen: For the sample quantities and storage requirements, please refer to Toxicology sample submission procedures & rates web page. Each sample should be contained in two, separately sealed, leak proof plastic bags or plastic containers with an appropriate absorbent surrounding the containers in case of leakage of material during transport.

Sample types	Samples	Storage	Packaging/Shipment
Fresh tissue	Liver, Kidney, Fat; brain	NO FIXATION Refrigerate, freeze (ideally)	Secondary container/Overnight
GI content **Feed** **Baits**	Vomitus; Stomach/rumen/ abomasal/intestinal contents;	Refrigerate, freeze (ideally)	Secondary container/Overnight
	Feedstuffs/baits	Kept dry in plastic or paper bags (ideally)	Secondary container/Overnight/2 days
Fluids	Whole blood	Refrigerate	Secondary containers/Overnight
	Serum/Plasma; Ocular fluid, Urine; Water	Refrigerate, Freeze (ideally)	Secondary container/Overnight

Labeling Specimens: Clearly mark on each container the date the sample was collected, case number, the name of the submitting agency/Veterinary Hospital, the owner's name if applicable and the animal's identification or description of the environmental source of the sample material. Proper labeling eliminates the possibility of a specimen becoming separated from its submission form or being mistaken for another specimen. **In addition, please, clearly mark any specimens that are suspected of carrying zoonotic diseases that could be considered hazardous to human health.**

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 191115-3 H SAMPLE TYPE WEKA WHOLE

DATE OF SAMPLE RECEIPT 20-11-19

DATE OF SAMPLE EXTRACTION 20-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN, REFRIGERATED

PORTION OF SAMPLE TO BE EXTRACTED STOMACH

WEIGHT OF SAMPLE USED IN EXTRACTION 9.887g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/N✓

EXTERNAL STANDARD Y/N✓ TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

FLUOROCITRATE 19ppm.

Technician [redacted] Supervisor [redacted]

22-11-19

Toxicology Submission Form

Date received:	Referral lab case ID#:	TOX CASE #:
20-11-19	191113-3	191113-3-J-S
Bill to:		
☐ Veterinarian	☐ Owner	☐ Other:

Species information						
☐ Bovine	☐ Canine	☐ Caprine	☐ Camelid	☐ Equine	☐ Feline	☑ Other:

Referral veterinarian:
Name:
Practice/Address:
Phone:
Fax:
E-mail:
Send report by: ☐ Mail ☐ Fax ☐ E-mail

Owner:
Name:
Address:
Phone:
Fax:
E-mail:
Send report by: ☐ Mail ☐ Fax ☑ E-mail

Animal identification		
# in group:	# affected:	# dead: 10

Animal ID/Name	Breed	Color	Sex	Age	Weight
RAT (3)	RAT				
RAT (4)	RAT				
RAT (5)	RAT				
RAT (6) – (10)	RAT				

Reason for submission (History/Clinical signs/Laboratory results)

POSSIBLE POISONING FROM SODIUM FLUOROACETATE COLLECTED ON 10TH 11-2019 FROM WESTPORT NORTH BEACH AM. MULTIPLE BODIES IN BAGS. 3 INTACT REST INNARDS MISSING STOMACH AREA SHOWED SIGNS OF PECKING AND CHEWING ALL RECEIVED FROZEN & LABELLED. 3 COMPLETE ANIMALS ANALYZED C.o.C COMPLETED

Current treatment(s) (List drug, dosages and times for each medication):

NA

SPECIMEN REQUIREMENT

ɔp tubes	SST: Serum separator	G: Green top tubes (Heparin)	
l blue tubes	P: Purple top tubes (EDTA)		

TOXICOLOGY TESTS

ulants ı (SST, R) / Plasma (P, G) : *ludes: Brodifacoum, Bromadiolone, Chlorphacinone,* *rol, Difenacoum, Difethialone, Diphacinone*	☐ Liver ☐ Bait	**GC-MS toxicant screen** ☐ Serum (SST, R) / Plasma (P, G) ☐ Liver	☑ Stomach content ☑ Other: INTESTINES
e blood (P, G)	☐ Kidney ☐ Other:	**Lead** ☐ Whole blood (P, G) ☐ Other:	☐ Liver
ıs	☐ Mixed Feed	**Magnesium** ☐ Serum (SST) ☐ Other:	☐ Liver
ates ı (SST) / Plasma (P, G) :	☐ Liver	**Manganese** ☐ Serum (SST) ☐ Other:	☐ Liver
n ı (SST, R) :	☐ Liver	**Metals & Minerals screen (ICP)** ☐ Liver ☑ Other: *Panel includes: As, Ca, Cu, Fe, Mg, Mo, P, Pb, Se. Zn*	☐ Feed
ı (SST, R) :	☐ Liver	**Methemoglobin** ☐ Whole blood (P, G)	
ene ı (SST, R)	☐ Tissues: ☐ Other:	**Molybdenum** ☐ Whole blood (P, G) ☐ Other:	☐ Liver
terase e blood (G)	☐ Brain	**Mycotoxin screen** (Aflatoxin + Vomitoxin) ☐ Feed	☐ Other:
im ı (SST)	☐ Liver	**Nitrate/Nitrite** ☐ Water ☐ Ocular fluid	☐ Serum ☐ Feed
e blood (P, G) :	☐ Liver	**Pesticides screen** ☑ Stomach content ☐ Feed	☐ Liver ☐ Other:
n (SST, R) (2-5 mg): er biopsy	☐ Liver ☐ Other:	**Plant ID** ☐ Plant ☐ Other:	☐ Mushroom
ach content	☐ Plant	**Selenium** ☐ Whole blood (P, G) ☐ Liver	☐ Feed ☐ Other:
, methanol e blood		**Strychnine** ☐ Stomach content ☐ Liver	☐ Urine
e glycol e blood y	☐ Stomach content	**Urea** ☐ Feed	☐ Liquid supplement
lehyde ach content	☐ Water	**Vitamin A** ☐ Serum (SST, R) ☐ Liver	☐ Feed ☐ Other:
n (SST, R) r:	☐ Liver	**Vitamin E** ☐ Serum (SST, R) ☐ Liver	☐ Feed ☐ Other:
		Zinc ☐ Serum/ plasma (RB*) ☐ Feed	☐ Liver ☐ Other:

nalysis: HPLC MS/MS POST EXTRACTION
STOMACH + INTESTINES. SOP 172+191

n: ALL.

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REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 19 1111 - 3L SAMPLE TYPE RAT WHOLE

DATE OF SAMPLE RECEIPT 20-11-19

DATE OF SAMPLE EXTRACTION 22-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED STOMACH

WEIGHT OF SAMPLE USED IN EXTRACTION 9-743 g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/N

EXTERNAL STANDARD Y/N TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

NONE DETECTED

Technician [redacted] Supervisor [redacted]

23-11-19

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 19 1115 - 3L SAMPLE TYPE RAT WHOLE

DATE OF SAMPLE RECEIPT 20 - 11-19

DATE OF SAMPLE EXTRACTION 22 -11- 19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED INTESTINES

WEIGHT OF SAMPLE USED IN EXTRACTION 9- 193g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/~~N~~

EXTERNAL STANDARD Y/~~N~~ TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

NONE DETECTED

Technician [redacted] Supervisor [redacted]

23-11-19

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 191115-3K SAMPLE TYPE RAT WHOLE

DATE OF SAMPLE RECEIPT 20-11-19

DATE OF SAMPLE EXTRACTION 22-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED INTESTINES

WEIGHT OF SAMPLE USED IN EXTRACTION 8-16g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/~~N~~

EXTERNAL STANDARD Y/~~N~~ TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

FLUOROACETATE 11 ppm

FLUOROCITRATE 119 ppm

FT-IR + RAMAN SHOWED PRESENCE OF TRIARYL GREEN DYE

Technician [redacted] Supervisor [redacted]

23-11-19

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 19115-3K SAMPLE TYPE RAT WHOLE

DATE OF SAMPLE RECEIPT 20-11-19

DATE OF SAMPLE EXTRACTION 22-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED STOMACH

WEIGHT OF SAMPLE USED IN EXTRACTION 9-319 g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/N

EXTERNAL STANDARD Y/N TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

FLUOROACETATE	21ppm
FLUOROCITRATE	312 ppm
FT-IR + RAMAN	SHOWED PRESENCE OF TRIARYL GREEN DYE

Technician [redacted] Supervisor [redacted]

23-11-19

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

SAMPLE IDENTITY 191115-3 J SAMPLE TYPE RAT WHOLE

DATE OF SAMPLE RECEIPT 20-11-19

DATE OF SAMPLE EXTRACTION 22-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED STOMACH

WEIGHT OF SAMPLE USED IN EXTRACTION 7 - 119g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/~~N~~

EXTERNAL STANDARD Y/~~N~~ TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

RESULTS

FLUOROCITRATE 14 ppm

Technician [redacted] Supervisor [redacted]

23-11-19

REPORT ON PESTICIDE RESIDUE

ANALYTICAL REPORT.

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DATE OF SAMPLE EXTRACTION 22-11-19 SAMPLE EXTRACTION METHOD SOP172

SAMPLE STORAGE and CONDITION FROZEN

PORTION OF SAMPLE TO BE EXTRACTED INTESTINES

WEIGHT OF SAMPLE USED IN EXTRACTION 8-376g

ANALYSIS

METHOD OF ANALYSIS SOP 191

CLEAN UP REQUIRED Y/N SOP 172

METHOD OF DETERMINATION AND DETECTION METHOD Agilent 1270 + SCIEX QTRAP QTOF 6500/6600

RECOVERY >99.8%

INTERNAL STANDARD Y/~~N~~

EXTERNAL STANDARD Y/~~N~~ TYPE PESTANAL

Batch Number

LIMIT of DETCTION 0.001ppm REPEATABILITY. 99.91%

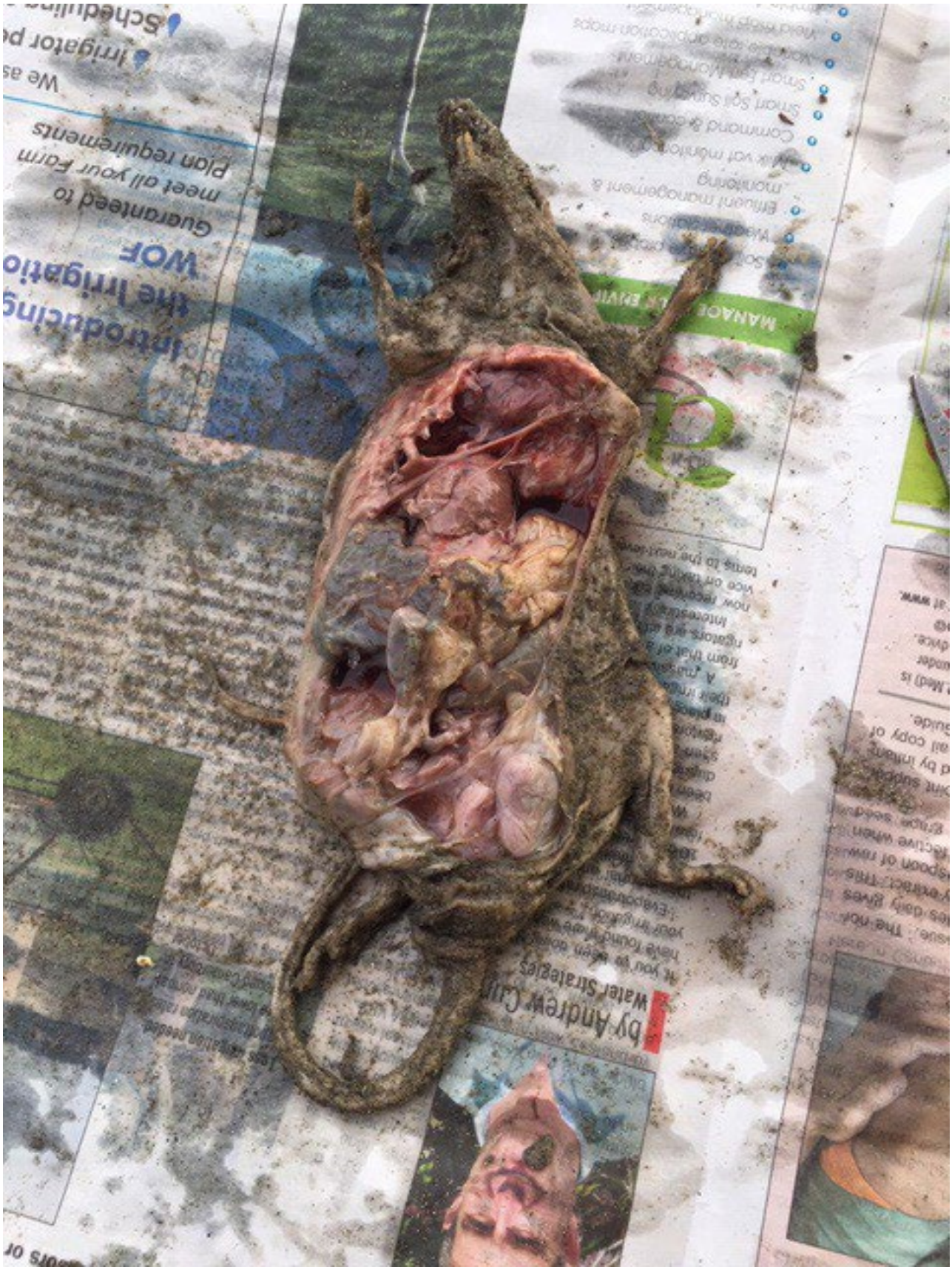
RESULTS

FLUOROCITRATE 3ppm

FT-IR + RAMAN SHOWED PRESENCE OF TRIARYL GREEN DYE

Technician [redacted] Supervisor [redacted]

23-11-19



Rat sample from North Beach, Westport