



Please note: This procedure may be revised as needed. The intended audience for this document is all National Animal Health Laboratory Network (NAHLN) laboratories.

All NAHLN Laboratories are expected to:

- Have the capability to electronically message test results for both foreign animal disease investigations (FADi) and outbreak associated testing.
- Electronically message HPAI associated test results as soon as possible.
- Provide messaged result as either Not Detected (NDET) for negative results or Non-Negative (NONNEG) for presumptive positive results.
- Provide results (either NDET or NONNEG) as a final report from the NAHLN laboratory. NVSL will message confirmatory results.
- Have a documented process in place to ensure that messaged results are successfully received by APHIS, including steps to follow if the messaged results are not received by APHIS.
- Submit all Non-Negative samples to NVSL for confirmatory testing.

Message Content specific to testing of cattle:

Program OID:

- Program OID for IAV-A messaging is 2.16.840.1.113883.3.5.8.4

FADi/RCA/Referral Numbers and PINS:

We will be requiring either a FADi for clinical animals or a PIN for samples from all non-clinical animals.

- Clinical Animals
 - The FADi number, referral number, or EMRS submission number (if provided) must be submitted in the message in the [orc.4/ei.1 field](#) exactly as they appear on the submission form with no spaces or additional characters added. If a FADi or referral number is not provided, reach out to you SAHO or AVIC.
 - A FADi number is required for clinically affected animals for NAHLN reimbursement.

Premises identification number (PIN)

- Non-Clinical Animals (if for pre-movement, for trace-out, or for concern of exposure)
 - Include the PIN for the location of the animal at time of sample collection.

- The PIN must be submitted in the message in the **PREM rol segment** in the **rol.13/pl.10/ei.1 field** exactly as they appear on the submission form with no spaces or additional characters added. If a PIN is not provided, reach out to you SAHO or AVIC.
- The PIN must represent the location of the animals at the time of sampling.
- A PIN is required for NAHLN reimbursement if testing is not part of a FADi.

Submission Reasons:

The following are the possible submission reasons for testing associated with the dairy cattle H5N1 event. Please do not use submission reasons not listed in this table.

Submission Purpose Code	Submission Purpose Text	Comments	NAHLN Lab Interpretation
F	FAD Diagnostics	Samples that are submitted as part of an original foreign animal disease investigation.	FAD investigation with an FAD #
EE	Emerging Event	Used, when directed by NAHLN, for testing in situations where it is suspected, but not yet confirmed, that an outbreak is possible. One example is incidents where a known disease program pathogen is found in a novel population. May also be used in testing related to Unexplained Mortality Event (UME).	Clinical animals, including bovines, not associated with an FAD investigation. May or may not be associated with a confirmed dairy premises. Wild birds and mammals associated with a dairy premises. If not dairy association use "W."
M	Interstate Movement	Movement of animals within the U.S.	Movement associated with the Federal Order (interstate)
H	Health Monitoring	Used for surveillance conducted outside of a national surveillance program, or for monitoring healthy animals, herds, or flocks.	Nonclinical animals – can include intrastate movement, worried well, etc.

E	Export	Used when testing animals prior to transport to a foreign country.	Nonclinical animals leaving the country
HM	Targeted Program Herd Monitoring	Used in special circumstances where federal programs have been developed temporarily to monitor herd or flock status for emerging or expanding pathogens. (Example 2024 H5N1 Herd Monitoring)	National Dairy Herd Status Monitoring Program-herds must be officially enrolled through AVIC.
R*	Research		Any AHPIS approved studies associated with validation, longitudinal testing, etc.
CP*	Commercial Product Monitoring	Used for testing commercial products derived from animal by-products, such as products made from milk like cheese, semen extender, butter, etc.	Products submitted for testing where results do not address animal health or food safety.

* NAHLN Program Office will not reimburse.

BTM Collection Form

Specimen Type:

- Spm.4/cwe.1 and spm.4/cwe.2
- SNOMED
 - 119321005 : Milk (HEALTHY SINGLE)
 - must also include if individual patient (P) or pooled (L)
 - 367371000009108 : Bulk tank milk (BTM, HEALTHY BULK TANK)
 - 367381000009105: Milk from milking string (subset of bulk tank, a rotation of cows in parlor; HEALTHY STRING)
 - 367391000009107: Milk from milk tanker (tanker truck, HEALTHY TANKER TRUCK)
 - 367411000009107 : Milk from sick animal(s) (sick pen, SICK COW(s) SAMPLE)
 - 367421000009104 : Milk from fresh cow (FRESH COW(s) SAMPLE)
 - 127457009 : Mammary gland
 - 119364003 : Serum
 - 421000009108 : Nasal swab

SAMPLE SOURCE	
<input type="checkbox"/> HEALTHY SINGLE	<input type="checkbox"/> SICK COW(s) SAMPLE
<input type="checkbox"/> HEALTHY STRING	<input type="checkbox"/> FRESH COW(s) SAMPLE
<input type="checkbox"/> HEALTHY BULK TANK	
<input type="checkbox"/> HEALTHY TANKER TRUCK	

- If you are uncertain on specimen type or mapping, please refer to the VTSL site (<https://vtsl.vetmed.vt.edu/nahln/main.cfm>). If you are unable to find what you need there, please contact the NAHLN Program Office.

Additional Guidance on specimen reporting:

- Pooled samples
 - For Patient
 - Lab generates a patient ID for each pool.
 - For Sample
 - The lab ID for the pooled sample should be reported in SPM2 – be sure SPM.2/EIP.2/EI.1 is unique.
 - If the LIMS supports it, report the identifiers on the individual samples in the pool in SPM.3 elements (they repeat)
 - Report ‘L’ (Pooled) in SPM.11
 - Report the count in SPM.13
- Bulk Tank Milk sample
 - These should not be pooled further at the laboratory.
 - Herd Status Surveillance Program using BTM.
 - This requires enrollment through the AVIC.
 - Submission Reason
 - Code: HM
 - Text: Targeted Program Herd Monitoring
 - PIN is required for reporting.
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Test LOINCs, Results, & Interpretations

IDEXX ELISA (Multispecies, product code 5004.20 or Swine, product code 59A5.20): 85534-6

- S/N Value reported in obx.5
- Interpretation in obx.8
- Sample type: serum

S/N	Interpretation	Client Reporting	Messaging Reporting
S/N < 0.40	Positive	Positive @ S/N	NONNEG
0.40 ≤ S/N < 0.5	Suspect	Suspect @ S/N	NONNEG
S/N ≥ 0.50	Negative	Negative @ S/N	NDET

- Sample type: milk

S/N	Interpretation	Client Reporting	Messaging Reporting
$S/N < 0.60$	Positive	Positive @ S/N	NONNEG
$0.60 \leq S/N < 0.7$	Suspect	Suspect @ S/N	NONNEG
$S/N \geq 0.70$	Negative	Negative @ S/N	NDET

PCR Matrix: 44263-2

- CT Value in obx.5
- Interpretation in obx.8
- NDET or NONNEG

PCR H5: 44264-0

- CT Value in obx.5
- Interpretation in obx.8
- NDET or NONNEG

H5 2.3.4.4.b: 77605-4

- CT Value in obx.5
- Interpretation in obx.8
- NDET or NONNEG

Not Detected Results May be Final

When a NAHLN laboratory has a result of Not Detected (NDET) on pan-influenza A assay (matrix or approved kit):

- They should message NDET in final reports.
- These results may be immediately actionable where the state agrees.
- No further testing will happen at NVSL unless requested by the state.

Non-Negative Results May be Actionable and Require Samples to be sent to NVSL for Confirmatory Testing

When a NAHLN laboratory has a result of Non-negative (NONNEG) on pan-influenza A assay (matrix or approved kit) or subtyping assay (H5 or H5 2.3.4.4):

- They should message NONNEG in final reports.
- Samples must be sent to NVSL for confirmatory testing.
- NAHLN results may be immediately actionable prior to completion of confirmatory testing.

Message Content specific to testing of cats:

Submission Purpose: EE (Emerging Event)

Species SNOMED:

- Code: 448169003
- Text: Felis Catus

Specimen type SNOMED:

- Brain tissue: 128157004
- Brain swab: 364781000009104

Premises ID:

- If not provided report NA or leave blank.
- Please report the premises state in the PREM rol (xad.4), as it is used to control access in EMRS.

Note on counties and reporting to CDC:

- We understand that many LIMS are unable to capture county. We are using the PIN, or if that is not provided, the address elements in the PREM rol to try and determine county. In cases where the PIN cannot be provided to you by the submitter, please be sure to report the street address, city, and state. We can use this information to try and determine the county.
- If your LIMS does capture county, please include in your results message in roll11/XAD.9.
- Please try to ensure that the premises state in the message is for the collection site and matches the state associated with the PIN.

Refer to NVSL-WI-1781 NAHLN Electronic Messaging Guide for further details on electronic messaging. This is a controlled document and a copy can be obtained through your lab's quality management system.