

## Collection &amp; transport

## Avian influenza detection

### Sampling swabs and transport media for detection of avian influenza in birds

Avian influenza is a highly contagious viral disease that occurs primarily in poultry and wild water birds.

The virus easily and quickly spreads through poultry flocks that it has created across 2021/2022 what has been the largest HPAI epidemic observed in Europe so far in terms of poultry outbreaks, number of dead birds and geographical spread.

For this reason, the implementation of stringent biosecurity measures in farms is essential.

Successful detection of avian influenza (AI) virus using PCR is dependent upon the quality of the sample and proper storage and handling prior to testing. The sample type will also depend on the type of birds that are being tested; oropharyngeal swabs from gallinaceous poultry and cloacal swabs from waterfowl are the preferred specimens for most diagnostic tests, although it is optimal to collect swabs from both locations, where possible. In addition to collecting the appropriate sample, selecting the right materials for sample collection and transport is very important.

The USDA-APHIS published Avian Sample Collection for Influenza A and Newcastle Disease<sup>1</sup> (recommends the use of Brain Heart Infusion Broth. Other acceptable viral transport media (VTM) cited in the recommendations include any salt-balanced, buffered media with a protein component such as tris-buffered tryptose broth (TBTB), nutrient broth (NB), and peptone broth (PB); or commercially available media, e.g. PrimeStore MTM (currently for Wildlife Services wild bird surveillance). Swabs used for sample collection should be synthetic or semi-synthetic swabs (e.g., polyester, rayon, nylon) with a plastic handle (flocked or spun head).

In Europe the Istituto Zooprofilattico Sperimentale Delle Venezie European Union Reference Laboratory for Avian influenza guidelines and minimum requirements for diagnosis of AI (and Newcastle Disease) references the diagnostic procedures developed according to the Diagnostic Manual for Avian Influenza (2006/437/EC) which also states that BHI Broth with antibiotics should be used for the transport of samples collected for testing.



To support surveillance activities in accordance with national and international surveillance and testing recommendations for the collection and transport of samples are available to order:

### Ordering information

Product	Description	Format	Order code
Thermo Scientific™ Sampling swabs	Disposable Sampling Swab, 100 mm breakpoint	100 swabs	R12544
	Disposable Sampling Swab, 80 mm breakpoint	100 swabs	R12680
	Polyester Tipped Swab, no breakpoint	1,000 swabs	R12548
Thermo Scientific™ Transport media	Brain Heart Infusion (BHI) Broth	100 x 4 mL	R060264
		50 x 9 mL	TV5090E
PrimeStore™ MTM	PrimeStore MTM Collection (1 mL)	50 x 2 mL tube with 1 mL fill	R13902
	PrimeStore MTM Collection (1.5 mL)	50 x 3 mL with 1.5 mL fill	R13903
	PrimeStore MTM Collection (1.5 mL)	50 x 5 mL with 1.5 mL fill	R13905
	PrimeStore MTM Collection (2 mL)	100 x 12 mL with 2 mL fill	R13907

### References

1. Avian Sample Collection for Influenza A and Newcastle Disease. January 3, 2023  
[https://www.aphis.usda.gov/animal\\_health/lab\\_info\\_services/downloads/WIAV0020.pdf](https://www.aphis.usda.gov/animal_health/lab_info_services/downloads/WIAV0020.pdf)

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