

Avian Sample Submission Instructions



These instructions should be used in conjunction with the **Avian Sample Submission Form** which can be downloaded from our website. Free sample kits, including submission forms, are available by post. Please contact the Biobest office to discuss your requirements.

Choosing your sample type

Biobest is able to extract DNA from the widest possible range of sample types. Each test has specific sample options; please refer to the table below for further information and instructions. It is possible to successfully extract DNA from egg membranes, feathers and blood in over 99% of samples. However it is harder to extract DNA from mouth swabs, not due to a test issue but due to sampling procedure, such that the successful extraction rate is about 60%. To maximise the chances of extraction success, please follow the sampling instructions very carefully and for mouth swabs read the additional information sheet. If we fail to extract DNA from your sample we will attempt a re-extraction (with the exception of mouth swabs), if this fails we will advise you and invite you to resubmit. There will be a further charge if a second sample is submitted.

Test	Egg Membranes	Mouth Swabs	Feather	Heparinised Blood	Faeces	Cloacal Swab	Tissue at PM
Sexing	√	√ ²	√	√			√
Chlamydia				√ ¹	√	√	√
PBFD			√	√			√
Polyomavirus			√	√	√	√	√
Pigeon Circovirus				√ ³	√ ³	√ ³	√

¹There is no published data confirming that blood gives comparable results to faeces or tissue for Chlamydia.

²On occasion it can be difficult to extract quality DNA from mouth swabs.

³There is limited validation on these sample types.

Egg Membrane: Carefully scrape the membrane from the inside of the egg (or take a **small** section of the egg with the membrane attached) and place in the labelled container provided. Please use containers provided and refrain from sending the whole egg as this will minimise potential sample cross-contamination. If storing samples for a few days before sending a batch, please allow to dry out before placing in container, to prevent DNA degradation.

Mouth Swab: Ensure the bird has no food in its mouth; if necessary rinse with water. Use only mouth swabs provided by Biobest. Remove swab from the tube (keep the lid attached) and rub the inside of the bird's cheek **firmly for at least 10 seconds**. Allow the swab to air dry for a few seconds. Place swab in the tube and push down the lid to close the tube. Pull the swab handle firmly away from the tube leaving the swab pad inside the tube. Close plug to seal tube. Label the tube clearly with the bird's reference (label provided). Please refer to the additional mouth swab sheet for further details.

Feathers: Pluck at least three feathers and place them in the labelled bag provided. Feathers should have follicle cells attached to them therefore mature chest feathers which come out easily are not the best to use. Newly emerging larger feathers are preferable as they contain feather pulp in their shafts. Clipped or moulted feathers cannot be tested. Please do not pluck primary, secondary or tail feathers.

Blood: It is advisable to use your veterinary surgeon for blood sampling in order to reduce the risk of contamination. If this is not possible blood can be collected by clipping the bird's toe nail. The tubes we supply in our kit contain heparin to prevent the blood clotting. About 50µl is required for sexing. PBFD, Polyoma and Chlamydia require at least 300µl. This can be too much for many smaller species. If in doubt please consult your vet, or consider an alternative sampling method.

Faeces: Collect a small amount of fresh droppings and place in the enclosed container. A pooled sample, i.e. a small amount of 'rice-grain' droppings collected over 3-5 days, will provide optimum sensitivity. Larger volumes of one sample will not increase the chances of a positive result.

Cloacal Swabs & Tissue Samples: These sample types should only be taken by a vet.

Please take care when collecting samples from more than one bird to avoid cross-contamination between samples. Use fresh instruments and disposable gloves for each sample. Taking blood from birds which are sick or have poor clotting can be dangerous. If in doubt please consult your vet.

Submitting your sample

Submission Form:

- Complete the submission form clearly and in full. Reports/certificates as generally faxed, although they can be e-mailed or posted if required.
- Make a record of the ID you have chosen for your bird. If you should need to contact us this will ensure we can quickly and easily locate your information.
- Please include payment with the sample (unless you hold an account with us). If you intend to pay by credit card please include the number printed in the signature box on the reverse of your card. We can accept cash, postal orders and cheques in pounds sterling. If you are a regular user and wish to open an account please contact us.
- **Prices are (inc. VAT) - Sexing, Chlamydia, PBFD and Polyoma £24.00 each, Circovirus – Price on application.**
- Package your sample, submission form and payment. A padded envelope is ideal. Send the package to the address below.

Please contact us for advice, test kits, submission forms or any other information. You can also visit our website (www.biobest.co.uk) to download the appropriate forms.

Accuracy of DNA Sexing

DNA testing is the method of choice for avian sex determination. There are several potential sources of error, each with slightly different implications.

Sampling error: When sampling several birds at one time the owner or breeder must be careful to ensure that each sample is labelled with the correct bird identity. In order to avoid cross-contamination, use fresh instruments and disposable gloves for each sample. Any mistake at this stage will lead to the result being reported against the incorrect bird.

Sample extraction: It is possible to extract DNA from >99% blood, egg and feather samples, however only from 60% of mouth swab samples. Failure to extract DNA will mean that a new sample will have to be submitted and you will be recharged.

Bird species: Biobest utilise 3 slightly different DNA techniques to successfully sex the vast majority of bird species. Please check our website for a list of species that we know can be sexed. Others may be possible but please contact us for advice before sending samples. In addition there is a particular line of Goshawks that require an adapted test, resulting in increased turnaround times. Please contact us if you have any queries regarding this.

Laboratory error: Accuracy rates are greater than 99%. Biobest take great efforts to achieve 100% accuracy, however it is important that owners and breeders understand that no laboratory test achieves 100% accuracy. If you suspect a result may be inaccurate please contact us to discuss. In most instances we will be happy to provide a retest free of charge.