

Genetic Testing Laboratory of the Bureau

Achieving a landmark feat, Animal Bureau has been accredited with ISO/IEC 17025:2017 standard on the facilities of genetic testing on 17th May 2024, for six genetic tests of cattle and buffalo conducted in 'Genetic Testing Laboratory (GTL)'. The accreditation is given by the National Accreditation Board for Testing and Calibration Laboratories (NABL) for two years in the field of 'Testing' under 'General Requirement for the Competence of Testing and Calibration Laboratories'.

The Bureau has been working, since long, on the karyotyping of cattle and buffalo and DNA based testing of genetic diseases – Bovine Leukocyte Adhesion Deficiency (BLAD), Citrullinemia, Factor XI Deficiency, Deficiency of Uridine Monophosphate Synthase (DUMPS) in cattle. These accredited tests are important for early identification of carriers of genetic diseases in dairy bovines, specifically breeding males. Another test, A1A2 allele genotyping in cattle, introduced recently, has also been accredited. The test is important for valuation of milk and selection of desired A2 allele in cattle.

These tests are routinely conducted following international standard, however, NABL accreditation would enhance the credibility of these tests among the stakeholders including semen banks of various states and farmers. The GTL of the Bureau is the only accredited laboratory in the country, working in the areas of such genetic testing in dairy animals.



NABL Accreditation Certificate

SERVICES/TESTING OFFERED BY ICAR-NBAGR

Following revised rates are applicable for the various services/testing offered by ICAR-NBAGR:

S. N.	Service code	Name/kind of service	Revised Rate
1.	01_KARYO	Cytogenetic screening/Karyotyping of all livestock species	Rs. 1400/- per sample
2.	02_BLAD	DNA test for screening of Bovine Leukocyte Adhesion Deficiency (BLAD) in cattle and buffalo species	Rs. 600/- per sample
3.	03_FXID	DNA test for screening of Factor XI Deficiency in cattle and buffalo	Rs. 600/- per sample

		species	
4.	04_CITRU	DNA test for screening of Citrullinemia in cattle and buffalo species	Rs. 600/- per sample
5.	05_DUMPS	DNA test for screening of Deficiency of uridine monophosphate synthase (DUMPS) in cattle and buffalo species	Rs. 600/- per sample
6.	07_A1A2	Genotyping of A1/A2 allele from milk or blood samples in cattle and buffalo species	• Govt./ Non-Govt./ Private agency: Rs. 1000/- per sample • Livestock owner / Farmer: Rs. 800/- per sample

- These rates of the services, except for Genotyping of A1/A2 allele from milk or blood samples, are applicable to all Government, Non-government and private agencies/stakeholders as well as private livestock owners/farmers/persons.
- Rate for “Genotyping of A1/A2 allele from milk or blood samples of cattle and buffalo (Code: 07_A1A2)” service is Rs. 1000/ per sample for all types of Government, Non-government and private agencies/stakeholders, and Rs. 800/ per sample for private livestock owners/farmers.
- The rate of **Breed Calendar** of livestock and poultry species for **Foreign national/individual/firm/agency** is **100 US Dollar or equivalent Indian Rupees for each calendar**, including postal charge(s).

GUIDELINES FOR SERVICES/TESTING OFFERED BY ICAR-NBAGR

- Payment(s) for the services should, preferably, be done through RTGS/NEFT to the Institute account by the applicant in following Bank account.

○ Name of Account holder	ICAR-UNIT-NBAGR, Karnal
○ Name of the Bank:	State Bank of India
○ Branch	Model Town, Karnal (Branch Code 01761)
○ Account Number	10093065125
○ IFSC Code	SBIN0001761
○ SWIFT Code	SBININBB654
○ MICR Code	1320002107

During electronic payment kindly mention the concerned “**Service Code**” in text information, further **information of e-transaction (with all descriptions) must be provided immediately** to the concerned Lab In-charge through email, so that (s)he can furnish the results to the agency.

- Demand Draft or Bankers Cheque may also be accepted. The amount may be deposited through a Demand Draft in favour of ‘**ICAR Unit NBAGR Karnal**’ payable at any nationalized bank at Karnal,
- Payment of different charges should be received to the institute **before delivering the result(s)** of service/consultancies. Agency can also make prior booking for any service by making full payment in advance as per rate list.
- Service tax for various services will be levied as per existing norms for service tax under appropriate Act(s) of Govt. of India.
- For any services, an application for conducting examination/screening addressing to the Director, National Bureau of Animal Genetic Resources, GT Bye Pass Road, Karnal must be accompanied along with samples. Applicant must provide full address along with phone/mobile/fax/email in application.
- Service will be provided as first come first serve basis. However, it is advisable to the applicant to contact the concerned lab In-charge for suitability of time in view of their research engagement as well as to avoid overcrowding of samples for analysis.
- Only following samples of farm animal species will be taken for any service for screening/examination provided by the institute.

Type of service	Farm animal for screening	Type of sample for screening
Cytological screening	Cattle, buffalo, sheep, goat, pig, horse, donkey, camel, yak, mithun	Whole Blood (Sterile, Heparin tubes under cold conditions)
BLAD, DUMPS, Citrullinemia, FXI deficiency	Cattle, buffalo	Whole blood, DNA (under cold conditions)
A1/A2 allele	Cattle, buffalo	Whole blood, DNA, milk (under cold conditions)

- Collection of sample(s) and their submission to the concerned lab will have to be carried out by applicant himself/herself or on their behalf. Only in exceptional cases, samples can be collected by NBAGR staff, for that applicant will have to provide TA/DA as per rule for the personnel.
- Samples will be received in the concerned lab in working hours of the working days only.
- Sample should clearly mention about the Animal ID on the collection tube. However, description of samples must be provided separately with Animal ID, breed, sex, age. However, information about the fertility status of the animal along with other requisites should also be provided in case of cytological screening.
- About 8-10 ml blood sample should be collected **under strictly sterile condition** in heparin coated vacutainer tubes (green top), for cytological analysis and EDTA coated tubes (purple top) for other services. Blood samples must be reached to lab as soon as possible (not beyond 48 hours after collection of blood for cytological analysis) preferably in cooled (at about 4°C) conditions. **Blood specimens, if frozen, hemolyzed clotted or not received in proper condition, will be rejected.**
- In case of any contamination or unproductive culture/result, blood samples will be resubmitted to the concerned Lab by the applicant at his/her own cost.
- Request for repeating the test(s) will be at additional cost as per rates payable by applicant.
- Since most of the tests specifically cytogenetic screening need longer time for analysis, therefore, intimation of the results may take about 30-45 days after receiving samples, depending upon number of samples received and type of service asked for.
- **Result(s) or its any part provided by the institute can not be permitted for use as an evidence or any other reason to any Vetro-legal case.**
- Being our utmost engagement in the livestock research and other bureau activities, providing any service(s) by the Institute will be sole discretion of Director, NBAGR and will not be binding to the Institute.