

Liver function tests in Cats and Dogs



In addition to its cellular integrity, testing different liver functions requires a number of tests, among which blood biochemistry plays an important role.

Bile Acids, which are synthesized by the liver, excreted in bile and recycled by enterohepatic circulation, are one of the parameters of choice for this test.

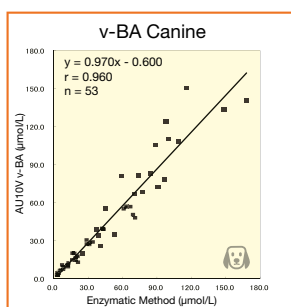
They take part in digesting fat in the food bolus.

It is normal to test this parameter on an empty stomach and after a high-fat meal to examine some liver diseases in particular.

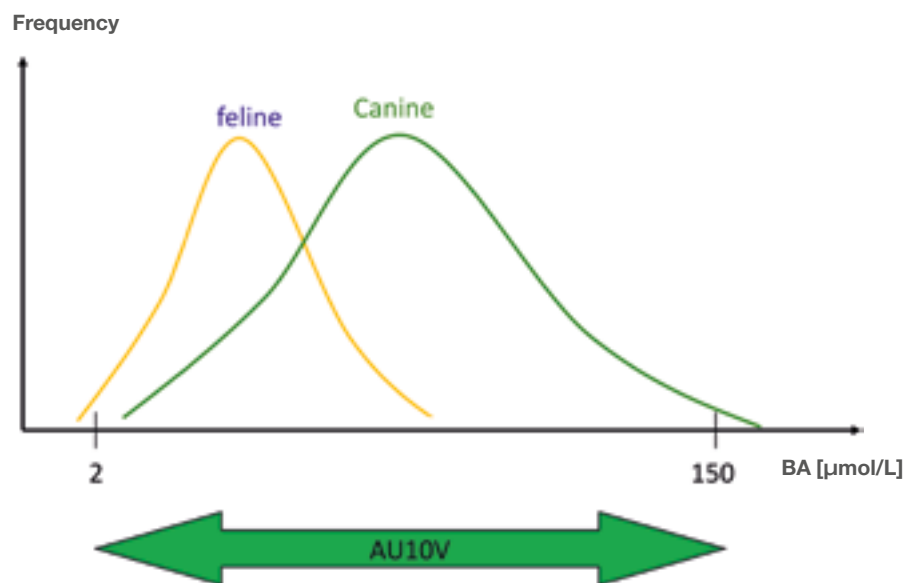
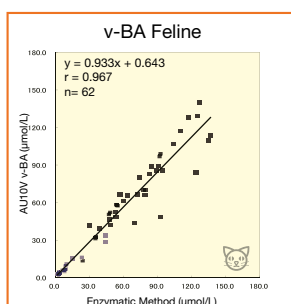
Immuno AU10 and v-BA (veterinary Bile Acids) - measuring range: 2 - 150 µmol/L

Contrary to the techniques available on the veterinary market, the range of reagent assays for bile acids used for the FDC Immuno AU10 covers all situations encountered.

v-BA Canine



v-BA Feline



Name	v-BA Cartridge
Analysis time	Approximately 10 min
Sample	Plasma and Serum - 100 µl
Measuring range	2 - 150 nmol/L
Common values in Dogs (µmol/L)	Pre-prandial < 8 Post-prandial < 25
Common values in Cats (µmol/L)	Pre-prandial < 5 Post-prandial < 15
Storage	2 - 8°C



Bile Acids (v-BA) Assay - Protocol for dynamic tests

- Pre-prandial blood collection (the Animal fasts for a minimum of 12 hours)
- After giving a high-fat meal, with sufficient quantity and quality to stimulate secretion of cholecystokinin by the small intestine and contraction of the gall bladder
- Post-prandial blood collection (2 hours after the meal)
- Values in Dogs (µmol/L): pre-prandial < 8 post-prandial < 25
- Values in Cats (µmol/L): pre-prandial < 5 post-prandial < 15

Testing different liver functions

The plasma or serum Bile Acids assay completes the diagnostic portfolio for testing different liver functions. The wise combination of the different blood parameters involved allow for each of the liver functions to be targeted more accurately.

Examined function	Usuable parameters
Cellular integrity	GPT, GOT, LDH
Bile excretion	Bile Acids, PAL, GGT (except for Cats), total Bilirubin
Synthesis	Proteins, Albumin, Cholesterol
Detoxification	NH ₃ , Urea
Vascularization - enterohepatic circulation	Bile Acids, NH ₃ , total Bilirubin

Bile Acids Assay - Possible uses

Focus: interpretation of the Bile Acids value depends on the amount of time elapsed since the last meal

- Pre-anaesthetic liver assessment (1 or 2 blood collections):
Bile acids are the reflection of good liver function, both for vascularization and enterohepatic circulation and for bile excretion. Thus, their assay before general anaesthesia assesses the abilities of the body to eliminate metabolised substances in the liver (anaesthetics, morphine, etc.)
- Testing and follow-up of chronic liver diseases (1 or 2 blood collections)
- Testing bile ducts (Cholangitis, Obstruction, etc.) - 2 pre- and post-prandial blood collections
- Diagnosis of hypos and vascular dysplasia (Portosystemic shunt, etc.) - 2 pre- and post-prandial blood collections
- Testing for steatorrhea - 2 pre- and post-prandial blood collections