

## Bile Acid Stimulation Protocol (canine and feline)

### Indications

- Used as an indicator of hepatic function and portosystemic vascular abnormalities.
- Note: Cholestasis may increase bile acids without it being indicative of liver dysfunction. **A bile acid stimulation test is therefore not warranted to provide additional assessment of hepatobiliary disease in a clinically jaundiced patient.**

### Notes

- Following ingestion of a fatty meal, gallbladder contraction releases bile acids into the duodenum to allow emulsification and absorption of fats. Bile acids are reabsorbed into the portal circulation from the small intestine, removed from the portal circulation by hepatocytes and recycled.
- In healthy animals, hepatic clearance of bile acids is very efficient, with only low levels being present in peripheral blood postprandially. Significant hepatocellular dysfunction, reduced hepatic functional mass, or shunting of blood away from the liver can all result in high bile acid levels.
- The exact type of fatty meal required is not critical provided it induces gallbladder contraction. A high-fat meal is not necessary, but low-fat and low-protein foods should be avoided if possible.

### Protocol

- **Fasted sample:** Collect 1-2 ml of blood in a plain/gel tube after a period of fasting (e.g. 8-12h) unless contraindicated by concurrent illness and/or age of the patient (e.g. in puppies consider sampling just before the next meal is due).
- Feed the dog or cat and visually confirm the meal was consumed.
- **Post-feed sample:** Collect 1-2 ml of blood in a plain/gel tube 2 hours after the patient has eaten.
- Separate the serum and correctly label the blood tubes with the patient's name. Ensure each sample is identified as 'fasted' or 'post-feed'.
- Submit the separated serum tubes with the request form to the laboratory.

### How much to feed?

- Feed a small amount of the patient's normal canned maintenance diet.
  - For patients weighing under 5 kg, feed at least 2 teaspoons.
  - For patients weighing over 5 kg, feed at least 2 tablespoons.
- Avoid overfeeding as excessive lipaemia may compromise results.

