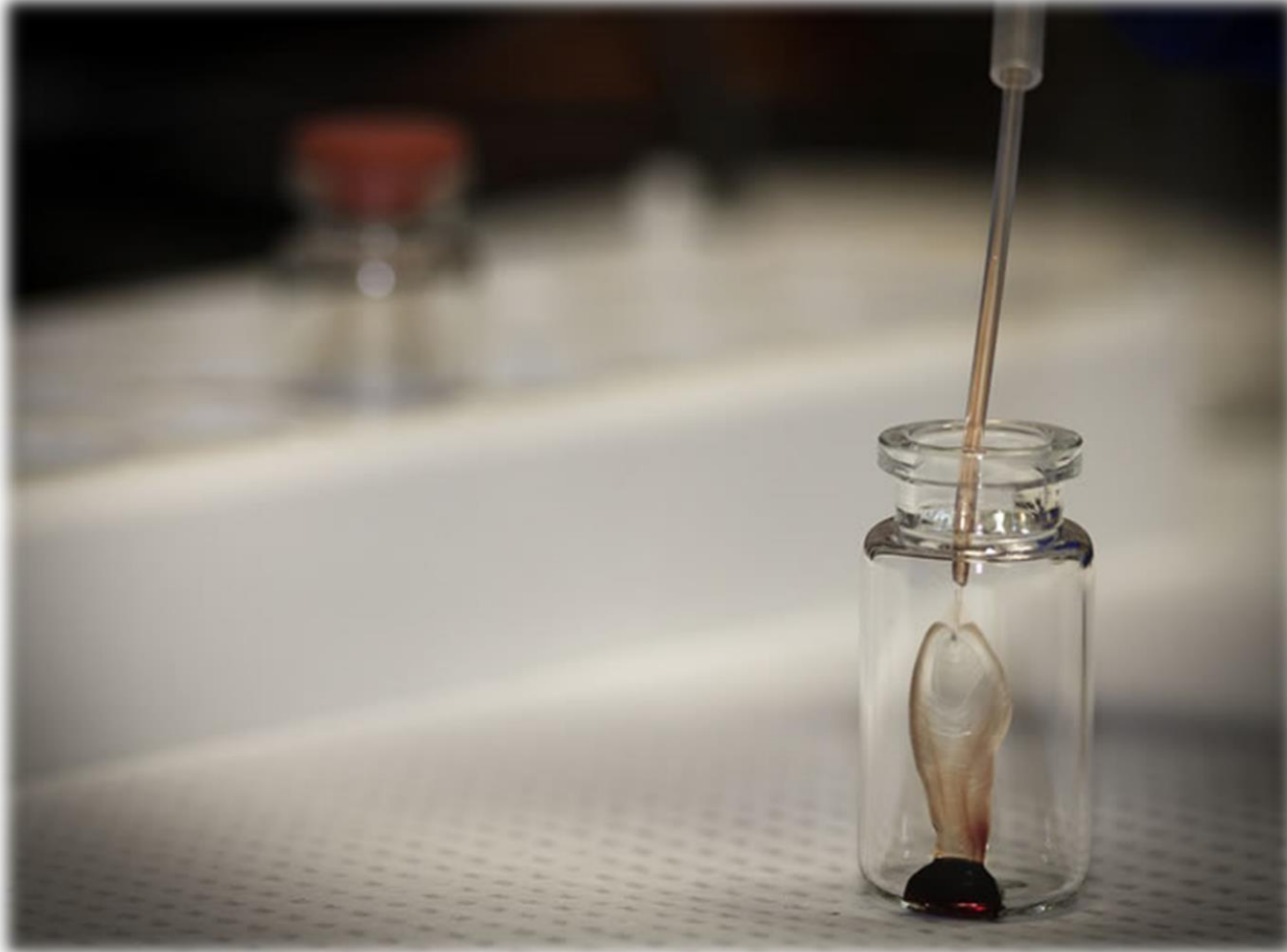


Collections and dispatch of specimens in Toxicological cases



Recommendations for sample collection and submission

- ✓ A detailed case history,
- ✓ Owner,
- ✓ Species,
- ✓ Breed,
- ✓ Sex,
- ✓ Age,
- ✓ Animal identification,
- ✓ Clinical signs,
- ✓ Gross appearance (including size and location) of the lesion(s),
- ✓ Previous treatment (if any),
- ✓ Time of recurrence from any previous treatment, and
- ✓ Morbidity/mortality in the group.
- The submission form should be placed in a waterproof bag.
- Waterproof markers should be used when labelling.

Toxicological sampling

- If a known toxin is suspected, a specific analysis should always be requested.
- A complete description of clinical and epidemiologic findings.
- Tissues or fluids for chemical analysis should be as fresh as possible and kept refrigerated.
- In rare instances a chemical preservative is required.

- Samples can be preserved for 72 hr if packed in a Styrofoam box with dry ice.
- Plastic containers, both bags and jars, are ideal.
- Jars with metal screw caps should be avoided.
- Packed individually & well labelled.
- If feed or water is suspected as the source of poisoning, it should accompany the tissue samples.
- In some instances, suspected feed may be fed to experimental animals .



Styrofoam box

Biological Fluids

1. Blood:

- Peripheral blood concentration has been shown to be more reliable.
- Usually 20 ml of blood is sufficient and it has to be preserved in sodium fluoride of 10 mg/ml and potassium oxalate, 30 mg/10 ml of blood concentration.
- The glass container should be made of amber glass.



Amber glass

- Sodium fluoride protects blood from post-mortem changes such as bacterial production of ethanol or other alcohols.
- It also helps to protect other labile drugs such as cocaine, nitrazepam and clonazepam from degradation.
- K₂EDTA may also prove useful in cases of suspected fluoride poisoning.

2. Urine sample:

- Concentrations are generally higher than in blood.
- A number of metabolites may also be present.
- Preserved in sodium fluoride.
- A sample of 20 ml is sufficient for toxicological analysis.

3. Bile:

- Opiates and acetaminophen(paracetamol).
- It is not routinely preserved.

4. Vitreous humour:

- Useful for alcohols, or in diabetes and insulin related deaths.
- Useful where the body has decomposed.
- Biochemical tests such as urea, creatine, glucose, lactose and alcohol.
- Is preserved with sodium fluoride (10 mg/ml).

5. Cerebrospinal Fluid (CSF):

- Rarely required for toxicological analysis.
- The CSF sample has to be preserved in sodium fluoride.

6. Other Fluids:

- Like Pericardial and Synovial Fluids can be used for toxicological analysis like alcohol.

