

Disease investigation sampling guide: lead exposure and toxicosis

Lead is highly toxic, particularly in cattle and lead toxicosis is a clinical condition still noted throughout Western Australia. In addition to animal health concerns, lead residues in livestock and livestock products pose risk to human health and to Western Australia's ongoing access to international markets.

Clinical suspicion

Clinical suspicion is based on clinical signs and/or evidence of access to lead sources. Young animals are more susceptible than adults and commonly present with acute clinical signs. Adult animals typically present with a subacute syndrome. Chronic lead poisoning is less common. Some animals may be lead affected without displaying clinical signs.

Clinical signs

Nervous signs

- Blindness
- Ataxia
- Salivation
- Head pressing
- Convulsions
- Tremors
- Death

Gastrointestinal signs

- Anorexia
- Constipation
- Diarrhoea

Other signs

- Anaemia
- Sudden Death

Common on-farm lead sources

- Lead batteries
- Painted surfaces
- Paint tins
- Sump oil
- Grease or oil filters
- Linoleum
- Caulking or putty



If you are concerned about lead toxicosis, please follow the sample sets on the next page.

| Sample type | Sample requirements |
|---|--|
| Antemortem samples | |
| Blood | EDTA: 10 ml whole blood per animal (preferred) or Lithium Heparin: 10 ml whole blood per animal, not separated. Other tube types like plain clotted and SST or plasma/serum are not suitable. |
| Milk | 10 ml per animal |
| Postmortem samples | |
| Liver | 50 g Fresh |
| Kidney | 50 g kidney – Fresh |
| Bone | 5 cm distal rib – Fresh Clean bone before submission |
| Lead particulate matter | Check rumen, reticulum or omasum |
| Environmental samples (if present) | |
| Paint – Scrapings, flakes, or power | Approximately 5 cm ² |
| Liquids* – Waters | Minimum 10 ml. Note: Oil and grease are not accepted for testing |
| Feeds and mineral mixes | Minimum 100 g |
| Soil* | Minimum 10 g |

*Tested at external laboratory