



**Faculdade de Medicina Veterinária  
Universidade de Lisboa**

Av. da Universidade Técnica de Lisboa  
Alto da Ajuda  
1300-477 Lisboa  
Tel: 3652800

**Laboratório de Farmacologia e Toxicologia**

Nº de análise	Data de pedido
Tox2020_021	01/04/2020

**Identificação Requerente**

Nome	Vulture Conservation Foundation
Morada	-----
Telefone	-----
email	-----
NIF	-----

Espécie	<i>Necrosyrtes monachus</i>						
Raça	-----						
ID	-----	IDADE	-----	SEXO	-----	PESO	-----

<b>Amostras</b>	<b>Origem</b>	Guiné-Bissau		
	<b>Necrópsia</b>	-----	<b>Data de recepção Laboratório</b>	01/04/2020
<b>Material enviado</b>	Fígado, conteúdo da moela, garras			
<b>Análise(s) solicitadas e realizadas(s)</b>	<b>Perfil realizado:</b> X Organofosforados ..... X Carbamatos <input type="checkbox"/> Organoclorados (DDT)..... X Moluscidas. X Rodenticidas/ Dicumarínicos.... X Estricnina <input type="checkbox"/> Herbicidas			
<b>Método Analítico</b>	Cromatografia de camada Fina (LD ≥ 2µg)			
<b>Resultado</b>	Foram detetadas substâncias do grupo dos Carbamatos/Moluscidas na amostra enviada para laboratório (ex: Metiocarbe)			
<b>Observações</b>				

Responsável do Laboratório

(Berta São Braz)

O responsável Técnico

(Andreia Grilo)



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## **Analysis Report**

The corps of vultures and the supposed bait were delivered to the Faculty of Veterinary Medicine on March 30.

The 3 vultures and 3 flasks (Figures 1, 2 and 3), containing the supposed bait (genital parts of a cow), were duly packed.



Figure 1 - Flasks containing the supposed bait (genital parts of a cow)



Figure 2 - Thermal box delivered with 3 vultures and 3 flasks containing the supposed bait



Figure 3 - Thermal box delivered after the removal of one of the vultures for forensic necropsy

The analytical process took place during the month of April, starting with the necropsy of one of the corps and only then the complementary analysis such as Toxicological analysis was done.

During the necropsy, the following material was collected for further analysis:

- Liver
- Gizzard content
- Claws

With the material collected during the necropsy and the supposed bait, research analysis of compounds of the organophosphate groups, carbamates, molluscicides, dicoumarins and strychnine were performed.

The samples were extracted through a solid-liquid extraction following the protocol of each chemical group in the indicated matrices.

With the obtained extract, Thin Layer Chromatography was performed, using the following standards for each of the chemical groups:

**Organophosphates** - Malathion

**Carbamates and Molluscicides** - Metaldehyde, Metiocarb, Aldicarb and Carbofuran

**Dícumarininos** – Bromadiolon

The results obtained indicate that in the supposed bait no substance was detected. However, the results indicate the presence of compounds from the group of Carbamates with a high suspicion of being Metiocarb in the liver sample (in Annex the Toxicology Report).

This result is supported by necropsy result (in Annex the Necropsy Report):

*The lesional picture allowed the identification of a pathological process of acute hyper evolution, with no infectious process lesions having been identified, which, associated with the results of the toxicological examination, allows us to conclude that the animal died due to toxicity in the group of organophosphates / carbamates.*



**FACULDADE DE MEDICINA VETERINÁRIA**  
**LABORATÓRIO DE ANATOMIA PATOLÓGICA**

**Necropsy Report Nº N81/20**

**Delivery date: 01/04/2020**

<b>Clinic:</b> José Pedro Tavares – Vulture Conservation Foundation		<b>M.V. Responsável:</b>	
<b>Nome:</b>		<b>Proprietário:</b>	
<b>Species:</b> Vulture	<b>Idade:</b>	<b>Sexo:</b> Escolha um item.	<b>Raça:</b>

**ECEIVED MATERIAL:** Vulture body.

**Macroscopic report:**

The sexing allowed to define that the body was of the feminine gender.  
The body weighed 1,150 kg, which corresponds to good body condition (Foto 1).  
Congested spleen (Foto 2).  
Kidneys were very pale in color (Foto 3).  
Toxicological examination was required.

**Microscopic Report:**

The heart did not show any significant changes.  
The lung had congestion and acute edema.  
The liver had congestion and edema.  
The proventricle showed calcification lesions in the submucosa glands.  
The ventricle (gizzard) had mild lesions of catarrhal inflammation.  
The small intestine had lesions of catarrhal enteritis, as well as the presence of several nematode parasites.  
The spleen had congestion and a moderate amount of hematic pigment.  
The kidneys had dispersed intratubular calcification, the presence of several hyaline cylinders and lesions of tubular necrosis.  
The brain had satellitism lesions and neuronophagy.

**Conclusion:**

The lesional picture allowed the identification of a pathological process of acute hyper evolution, with no infectious process lesions having been identified, which, associated with the results of the toxicological examination, allows us to conclude that the animal died due to toxicity in the group of organophosphates / carbamates.

The Pathologist,

Jorge Correia

15/05/2020

N 2020 0081 Fotos



Foto 1 - Good body condition.



Foto 2 - Congested spleen



Foto 3 - Kidneys were very pale in color