Labbasa Health Department

For

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Institute of Marine Resources
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By

Department

An assay for Quinacrine in fish supplied from Labasa Health
The liver to give 100 grams. The darker portions of the fish was separated and pooled with from the pieces.

100g of muscle tissue, devoid of skin and bones, was prepared.

PREPARATION OF SAMPLE

Prepared for analysis.
Sample was chewed out and appropriate amount of tissue

MATERIALS AND METHOD

toxicity tests.

was supplied to us by the Health Department Labbase for pieces of fish suspected to have caused poisoning at Labbase.

INTRODUCTION
Volume was made up to 20 ml with 1% tween 60 saline. The
graduated test tube, with a pipette using 1% tween 60 saline, the
ethanol was then evaporated. The toluene extract was transferred to a
the evaporating flask on smaller evaporating flask using ethanol.
then evaporated on the rotary evaporator. The residue was washed from
recovered mechanical in the smaller evaporating flask. Mechanical was
the mechanical layer from this separation was added to the previously
of heptane added to the top layer (hexane) and partitioning repeated.
into a smaller evaporating flask while 20 ml of 90% methanol and 100 ml
form partition layers. The bottom layer (methanol) was drawn
of 90% methanol. The two solvents were placed in a separating funnel
extract was then washed out in a flask with 20 ml of heptane and 100 ml
flash and the decanted ether evaporated in the rotary evaporator. The
ether layer from the second separation was added to the evaporating
separation of water and ether layers repeated in the separating funnel.
the distilled water layer, 20 ml of distilled water was added and the
into a flask and the ether layer transferred to evaporating flask. To
between ether and water, the bottom layer (i.e., water) was drawn
water was added and after shaking, left for 5 minutes to form partition
20 ml of distilled ether into a separating funnel. 20 ml of distilled
(heptane or i-110) and a water bath. The extract was washed out with
The local flitter was evaporated using a rotary evaporator.
flittered again and the residue homogenized and flittered a third time.
Homogenized in the blender for 2 minutes. The homogenate was
across a suction pump and Buchner flask. To the residue, 200 ml of
for 2 minutes. The homogenate was flittered (No. 1 flitter paper)
homogenizer and 300 ml of acetone added. The sample was homogenized.
The known quantities of the prepared samples were placed in a

EXTRACTION AND PARTIAL PURIFICATION
If one infected 0.5 ml, 0.4 ml, and 0.4 ml of toxin, respectively, in an example calculation:

Weight within 24 hours

with minimum amount of toxin required to kill a mouse of 20 grams body weight of each of the three respective mice and only survived which was one in 6 mice. One mouse unit is defined as the weight of death of mice, the toxicity level was calculated.

24 hours

needed for 3 hours and the death time of mice dead, observed within

respectively, of the toxin extract. The reaction of the mouse was

20 grams each were infected, interpreted, approximately 0.5 ml and 0.4 ml from the test solution, 3 laboratory mice weighing approximately

MOUSE TEST

Test solution

Extract with acetone

Extracts

Ethyl layer

Water layer

Partition between ethyl and water

Partition between heptane and 90% methanol

Hexane layer

90% methanol layer

Partition with 1% Tween 60 saline

Emulsion with 1% Tween 60 saline

The procedure outlined above is summarized in Figure 1.
No toxicity was determined in the sample.

**GENERAL COMMENTS**

<table>
<thead>
<tr>
<th>Tissue Tested</th>
<th>Species</th>
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<tr>
<td>Flesh Liver</td>
<td>Balbomorropus murcus</td>
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**RESULTS**

4.16 mg/100g of tissue.

Premiers of tissue the toxic score of the tissue sample will be

Since the final extract (2.5 ml) would have been prepared from 100

0.6

2.5 - 4.16 mg.

of toxin. The total amount of toxin in 2.5 ml extract will therefore

Thus 0.6 mg of extract will be attributed to contained 1 mouse unit (mu)