

Name: _____

Reg./Sr.No. _____

Date _____

DEPARTMENT OF MEDICAL PHARMACOLOGY
LAB PRACTICAL SHEET FOR MPHL-232
Demonstration of the Anti-inflammatory effects of some NSAIDS
In Rats

Methods:

This method measures the increase in paw volume (oedema) of rats following the administration of the inflammatory substance carrageenan (1%).

1. The paws of the right limbs of all animals are marked, and their volumes measured by using a plethysmometer.
2. At zero time:
The test drugs or their vehicles are administered to all the rat groups as follows:
Group I : Diclofenac (5mg/kg, i.p.).
Group II : Propylene glycol/i.p. (Control for group I).

Group III : Aspirin (300mg/kg, p.o.).
Group IV : Carboxymethylcellulose/p.o. (Control of group III).
(CMC)

Group V : Ibuprofen (20mg/kg, p.o.).
Group VI : Carboxymethylcellulose /p.o. (Control for group V).
(CMC)
3. At 15 minutes:
Carrageenan (0.1ml/paw) is injected in the right hind paws of rats in groups I and II.
4. At 30 minutes:
Carrageenan (0.1 ml/paw) is injected in the right hind paws of rats in group III, IV, V and VI.
5. Carrageenan is allowed to act for 2 hours after which the volumes of the hind paws are measured.
6. The effect of the test drugs on the volume of oedema is calculated.

7. a) Write your observations in the following table:

Group	TREATMENT	PAW VOLUME (ml)		Difference
		Reading Before drugs	Reading After drugs	
Exp – 1 GP I GP II	Diclofenac, (5mg/kg, i.p.) Propylene glycol (i.p.)			
Exp – 2 GP III GP IV	Aspirin (300mg/kg.p.o.) CMC (p.o.)			
Exp – 3 GP V GP VI	 Ibuprofen 20mg/kg (p.o.) CMC (p.o.)			

b) **Comment on the observations you have obtained:**

Exp. 1

Exp. 2

Exp. 3

Note: i.p. = Intraperitoneally; p.o. = per os (orally).