



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 Issue: II Month of publication: February 2021

DOI: <https://doi.org/10.22214/ijraset.2021.32987>

www.ijraset.com

Call:  08813907089

E-mail ID: ijraset@gmail.com

Total Lipid Content of *Ascaridia Galli* from its Host *Gallus Domesticus*

R. M. Khadap

Department of Zoology, Nutan College Sailu. Dist. Parbhani-431503 M.S. India.

Abstract: Lipid are important constituents for an animal body as they serve both in structural makeup and in energy yielding, but in parasites there is a good deal difference in the mode of procurement of these important metabolites. They may be available to them in digested or semi digested state. In helminthes the fatty acid synthesis is very limited as per the studies of Ginger and Fairbairn, 1966. In nematode most of lipids located in the hypodermis especially in the lateral cords, muscle cells, intestinal cells and ovaries. Lipid is the chief food reserve in free living nematode and plant parasitic nematodes.

Keywords: *Ascaridia galli*, *Gallus domesticus*, total lipid content.

I. INTRODUCTION

In helminth worms are the biological importance of lipids as group of certain related hydrocarbons, various attempts have been made to have a data on total lipid content of several helminth parasites. The total lipid content of *Ascaris lumbriciies* have been worked out in fresh tissue in both male and female worms by Cavier et.al,1958. The lipid content has been worked out in dry tissue of *Nippostrongylus brasiliensis* by Roberts and Fairbaim,1965. The lipid content in *Ascaridia galli* has been worked out in fresh tissue of male and female worms by Shorb and Shorb,1966, hence the author in his present study made an attempt to estimate the total lipid content in male and female worms of *Ascaridia galli*.

II. MATERIAL AND METHOD

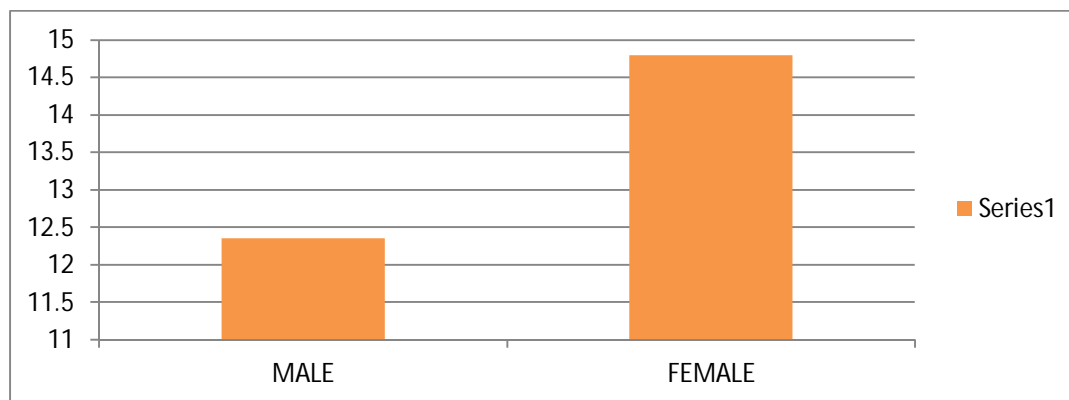
The nematodes were collected from intestine of *Gallus domesticus*. Required quantity of these sample dried at 48-50⁰c for 48 hrs separately and preserved powdered samples weighted for quantitative estimation of lipid, % between male and female by methanol, chloroform estimation method (Barner H. and Block Stok,1973).

III. RESULTS

The results obtained on the total lipid content male and female worms is 12.35 and 14.80 respectively. The male to female ratio of lipid content is 0.83 indicating that its content is more in female by 16.55%.

TABLE:1 Total Lipid content in (mg%) in male and female worms of *Ascaridia galli*

SEX	CONTENT	Male to female ratio	Percentage difference
MALE	12.35	0.834	16.55
FEMALE	14.80		



Total lipid content in (mg%) in male and female worms of *Ascaridia galli*

IV. DISCUSSION

The result obtained on the total lipids of the *Ascaridia galli* has necessary prerequisites conducive to its parasites to its parasite mode of life. The value of total lipid (wet weight) are comparable in trend with that of *A.lumbricoides*, male 1.3% and female 1.6% as reported by Cavier et.al., 1958 and in dry tissue they agree in trend with those of *A.lumbricoides*, male 6.7% and female 11.9%, Roberts and Fairbairn, 1965. In *Ascaridia galli* and *Ascaridia lumbricoides* female has higher lipid content which is justifiable as per the structural needs for their large number of eggs. There is a variation in the individual value of the parasites mentioned above which is due to species difference, different host, their metabolism and habit of the parasites. The results of the lipid contents are significantly more on female worm. The difference between the two sexes. It can be inferred that the female worms are metabolically more active.

V. ACKNOWLEDGEMENT

The author are thankful to the Principal Nutan Mahavidyalaya sailu, for providing laboratory facilities.

REFERENCES

- [1] Cavier R., Savel J. and Monteoliva M. 1958. Nature at repartition selon le sexe des substances lipidiques chez *A.lumbricoides* Linne, 1758. Bull.Soc.Chim.Biol. pp 177-187.
- [2] Ginger C.D. and Fairbairn D. 1966. Lipid Metabolism in helminth parasites I the lipid of *H.diminuta*. J.Parasitol(52) pp 1086-1096.
- [3] Roberts L.S. and Fairbairn D. 1965. Metabolic studies on adult *Nippostrongylus brasiliensis*. J.Parasitol(51). pp 129-138.
- [4] Shorb D.A. and Shorb M.S. 1966. Phospholipids of some worm parasites. Proc. Inter. Congr. Parasitol Vol.(2) pp 59-61.
- [5] Yamaguti S. 1961. Systema Helminthum Vol.III. The nematode of Vertebrate Part I & II. Interscience Publishers Ltd. London.



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)