Appendices

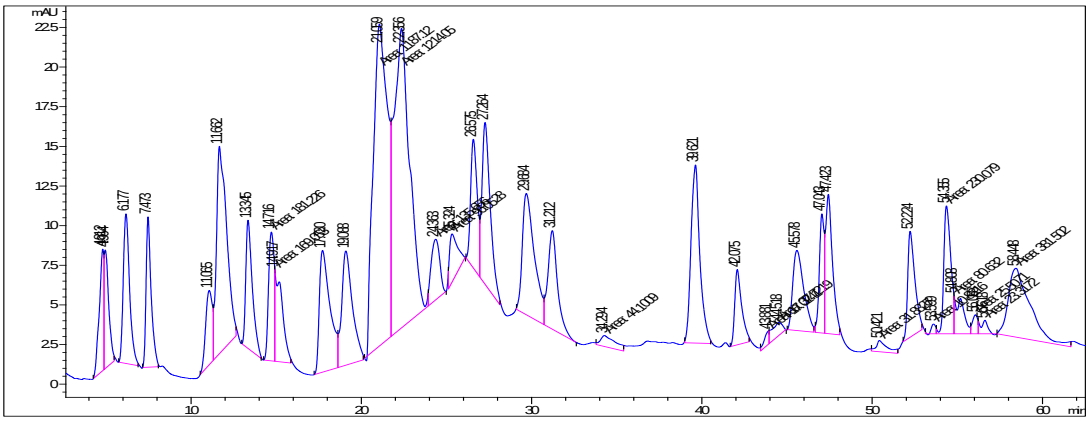

Figure 9.1. HPLC Chromatogram of 32 standard amino acid mixture.

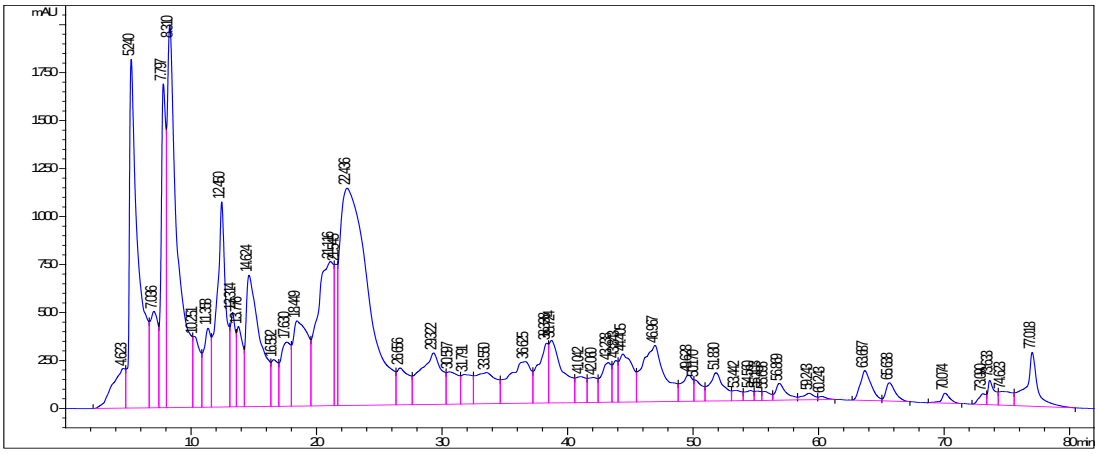

Figure 9.1a. HPLC Chromatogram of amino acids content of *Vespa affinis*

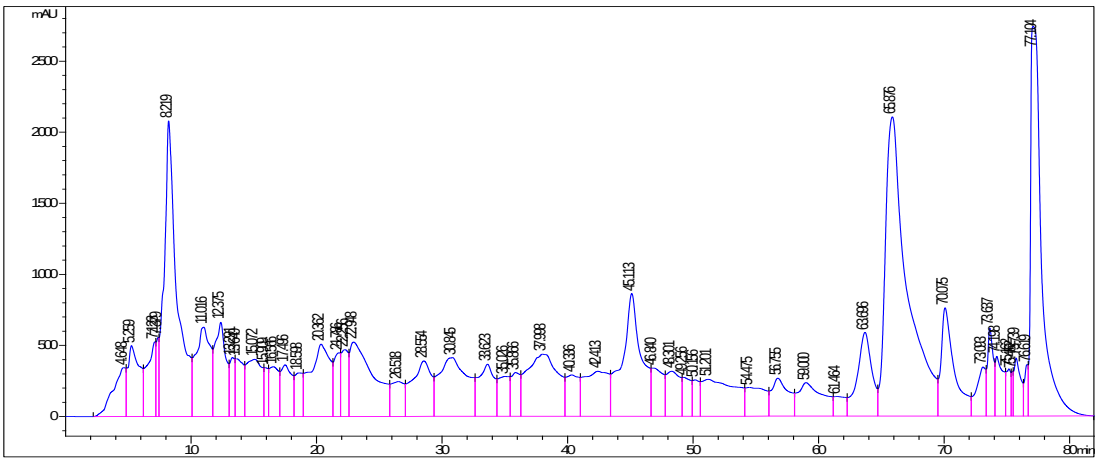

Figure 9.1b. HPLC Chromatogram of amino acids content of *P.Olivaceus*.

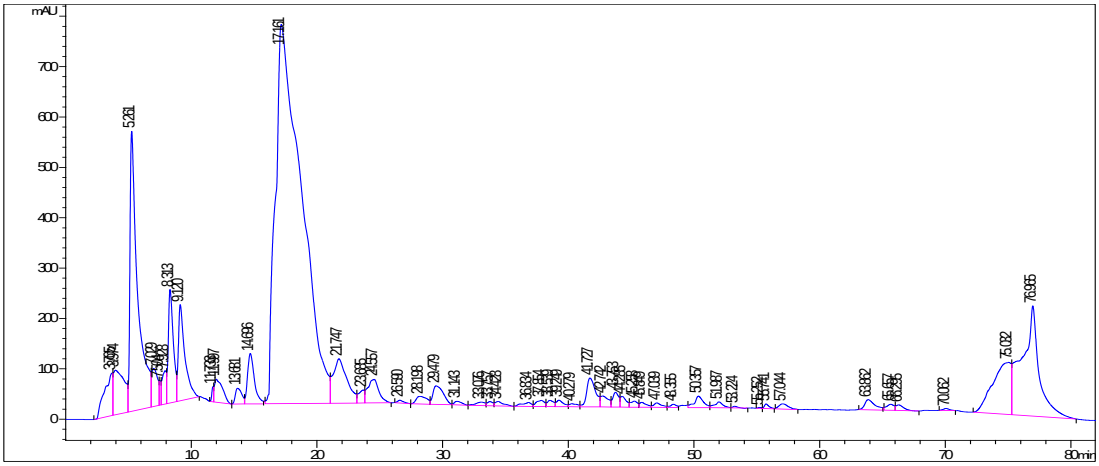

Figure 9.1c. HPLC Chromatogram of amino acids content of *Parapolybia varia.*

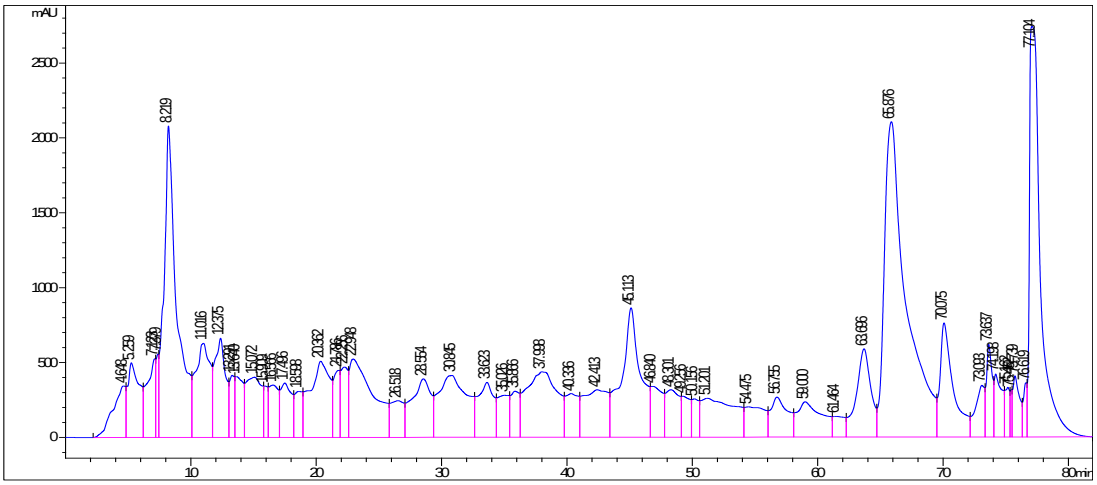

Figure 9.1d. HPLC Chromatogram of amino acids content of *Oecophylla smaragdina*

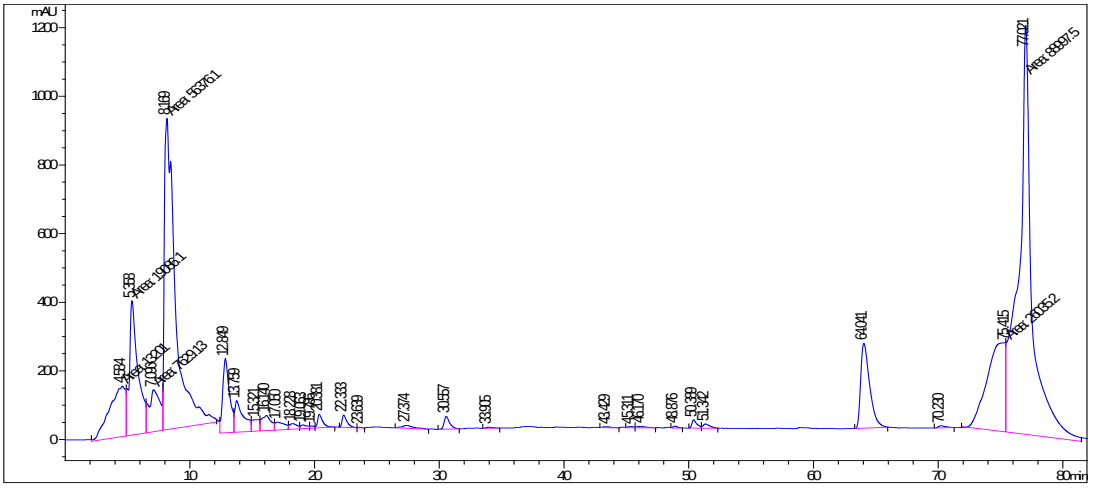

Figure 9.1e. HPLC Chromatogram of amino acids content of *Lethocerus indicus.*

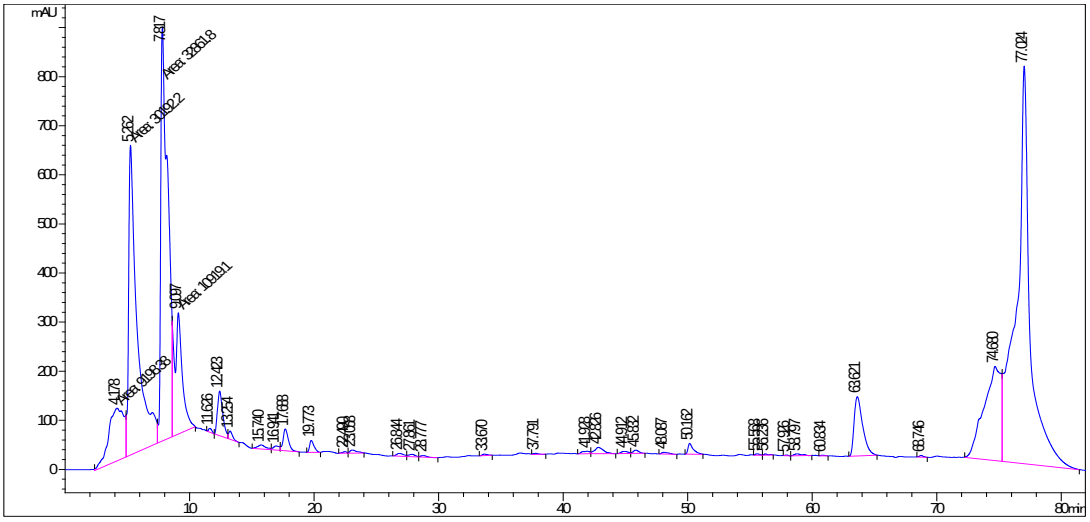

Figure 9.1f. HPLC Chromatogram of amino acids content of *Tarbinskiellus portentosus*

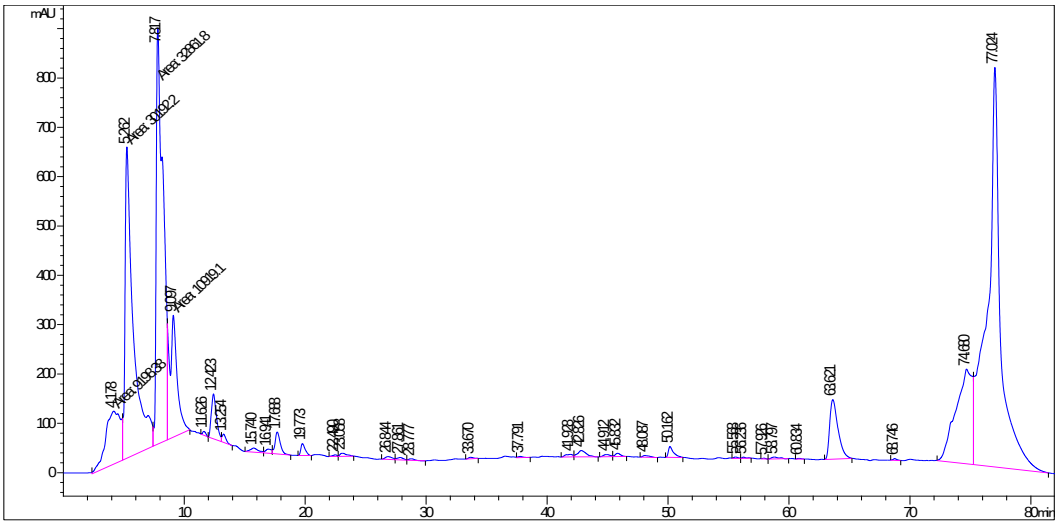

Figure 9.1g. HPLC Chromatogram of amino acids content of *Eupreponotus inflatus*

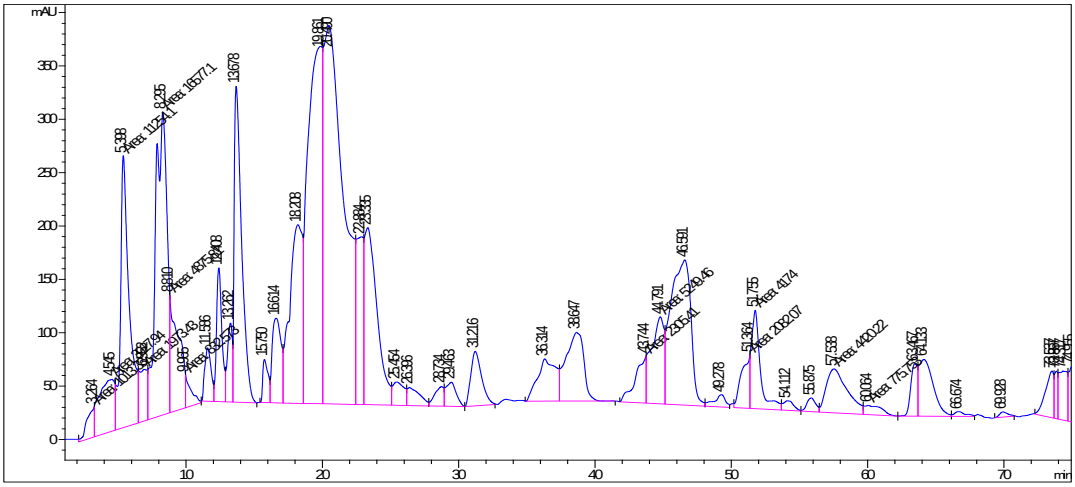

Figure 9.1h. HPLC Chromatogram of amino acids content of *Choroedocus robustus*

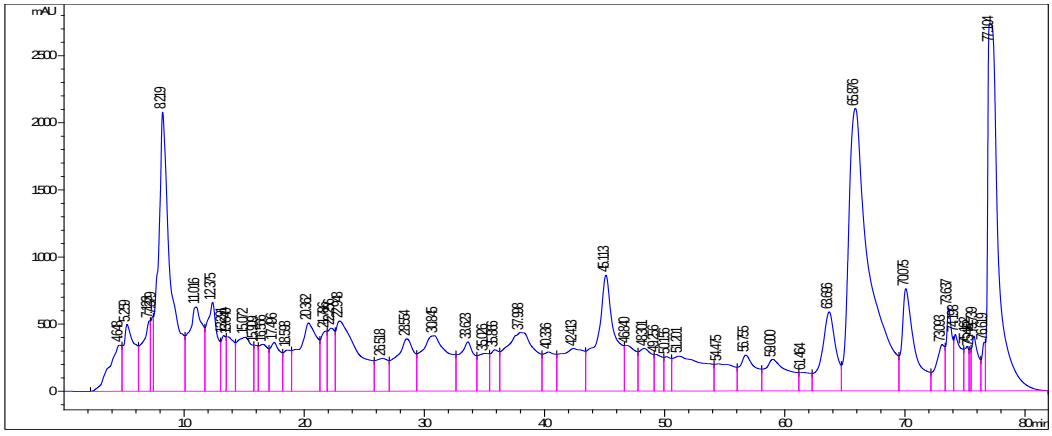

Figure 9.1i. HPLC Chromatogram of amino acids content of *Chondracris rosea*

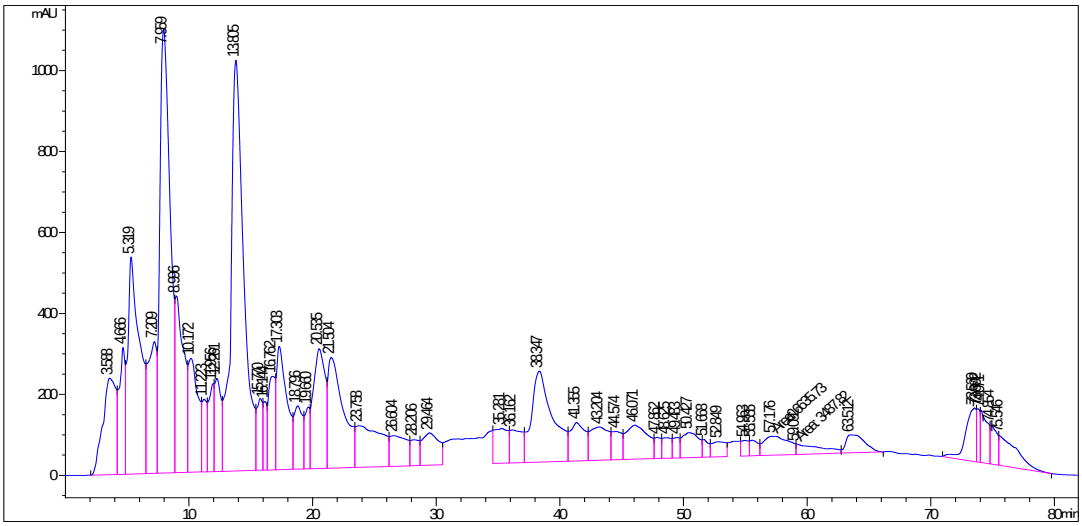

Figure 9.1j. HPLC Chromatogram of amino acids content of *Oxya fuscovittate*

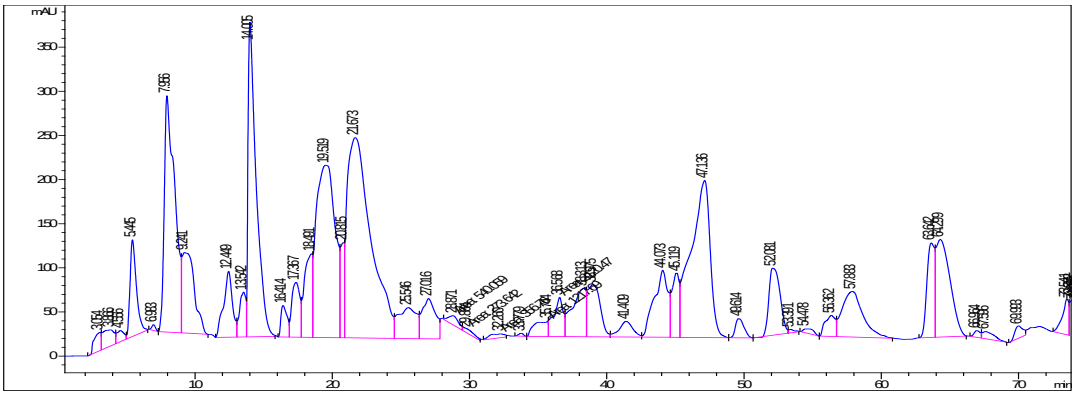

Figure 9.1k. HPLC Chromatogram of amino acids content of *Mecopoda elongata elongata*

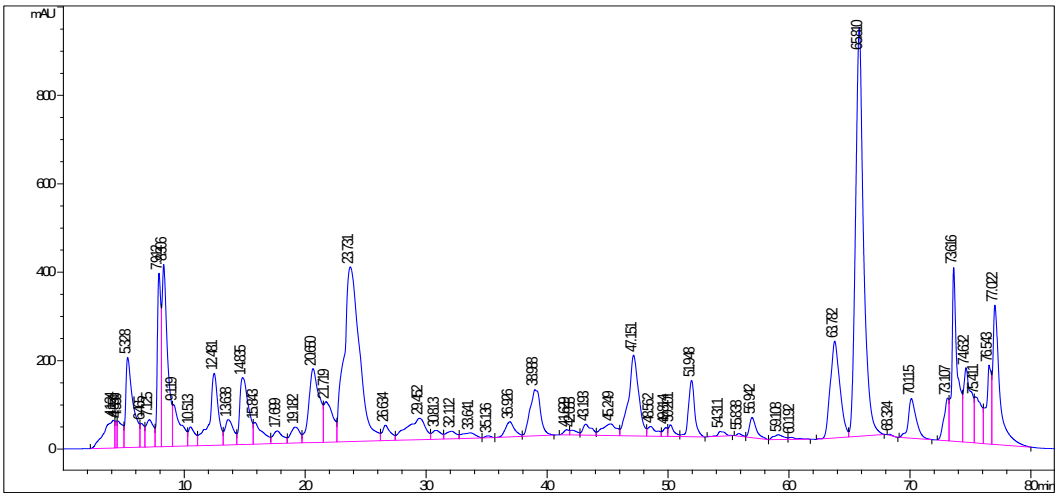

Figure 9.1l. HPLC Chromatogram of amino acids content of *Ruspolia baleyi*

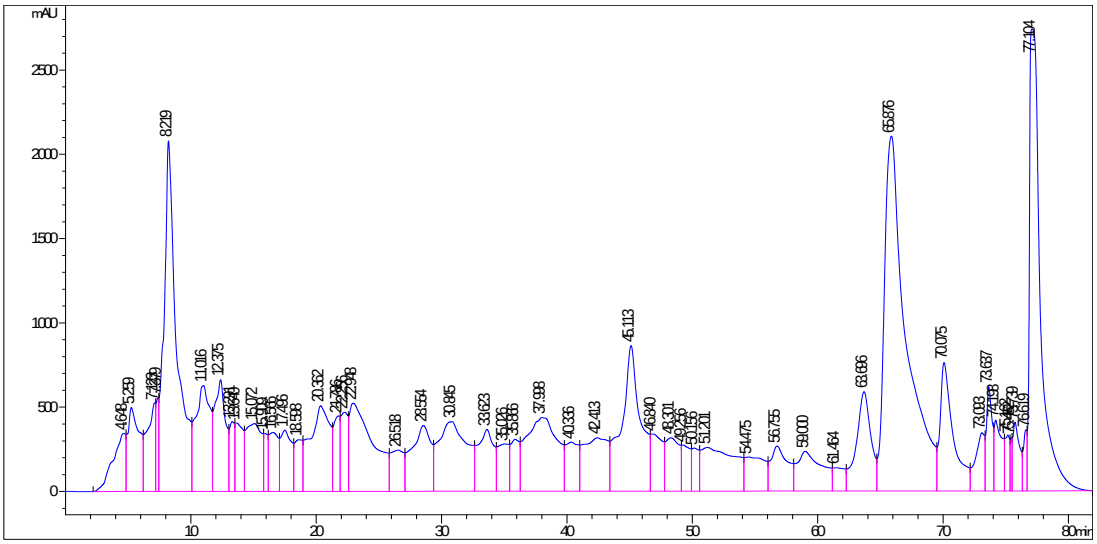

Figure 9.1m. HPLC Chromatogram of amino acids content of *Cybister tripuntatus*

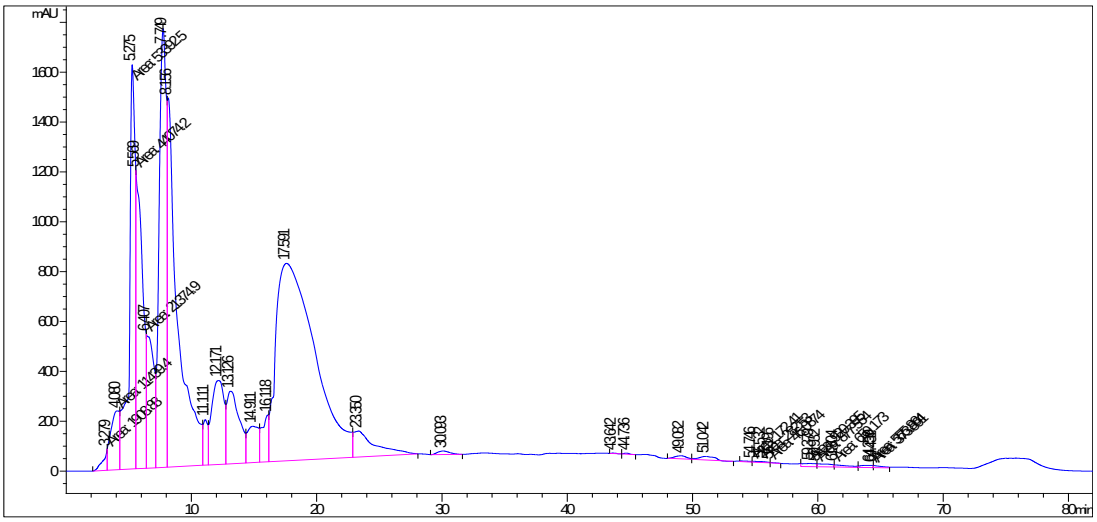

Figure 9.1n. HPLC Chromatogram of amino acids content of *Coleoptera* sp. (Bwrbila gedet).

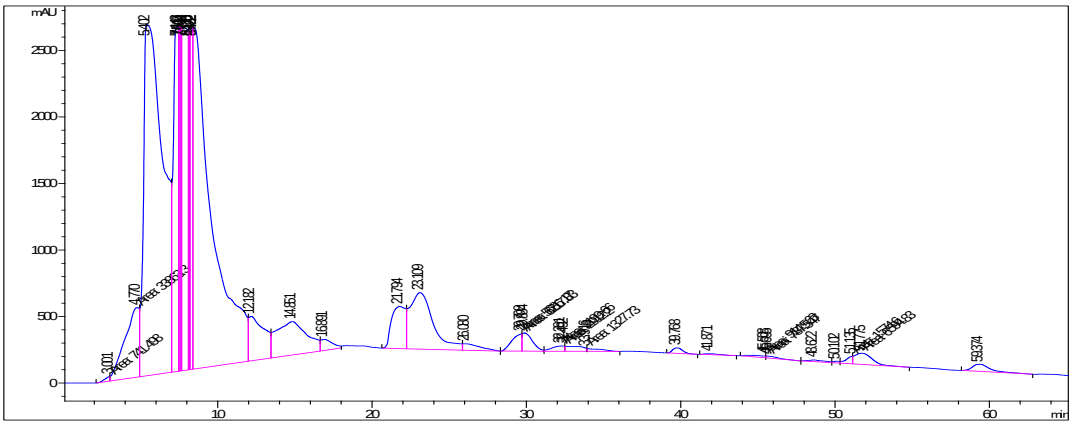

Figure 9.1o. HPLC Chromatogram of amino acids content of *Coleoptera* sp. (Bwrbila fisa).

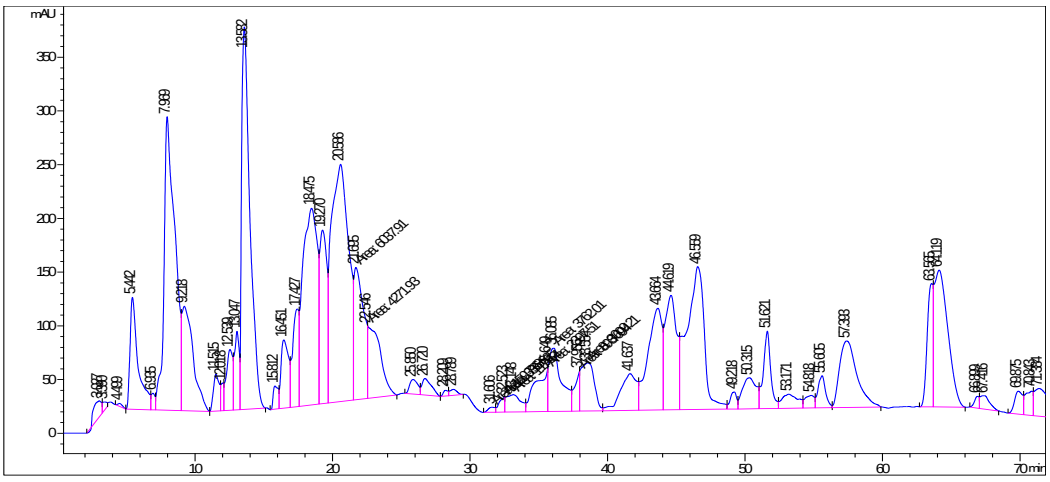

Figure 9.1p. HPLC Chromatogram of amino acids content of *Macrotermes* sp

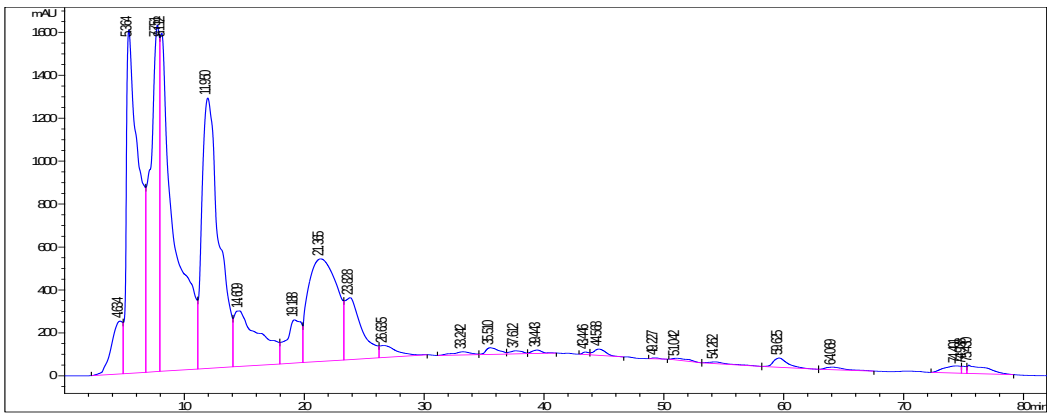

Figure 9.1q. HPLC Chromatogram of amino acids content of *Nephila* sp.

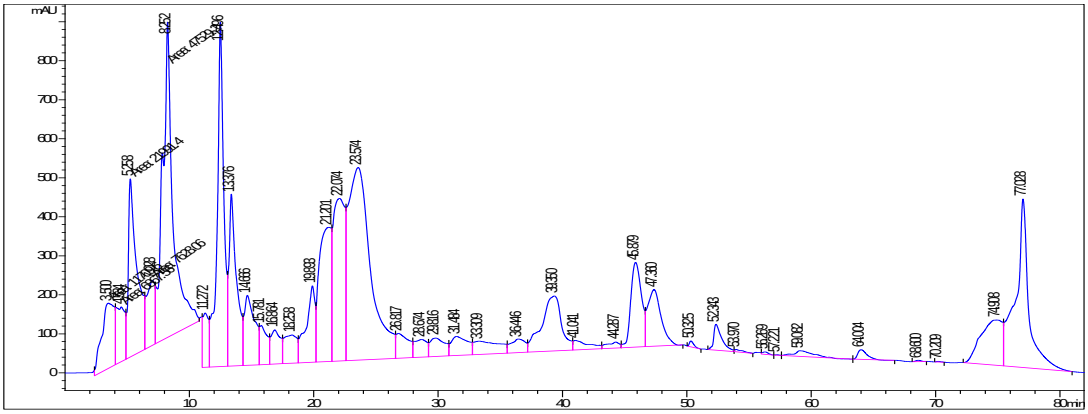

Figure 9.1r. HPLC Chromatogram of amino acids content of *Lepidoptera* sp. (Gunjet)

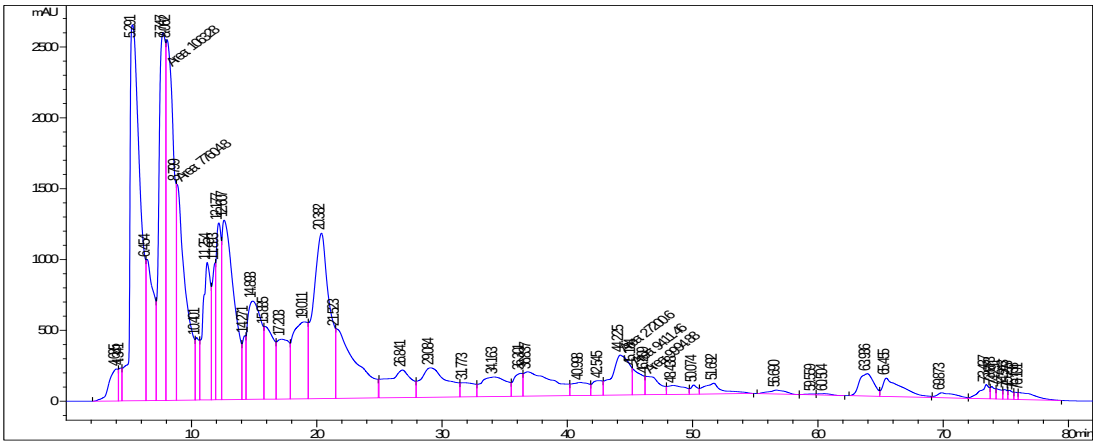

Figure 9.1s. HPLC Chromatogram of amino acids content of *Odonata* sp. (Garba famgthe)

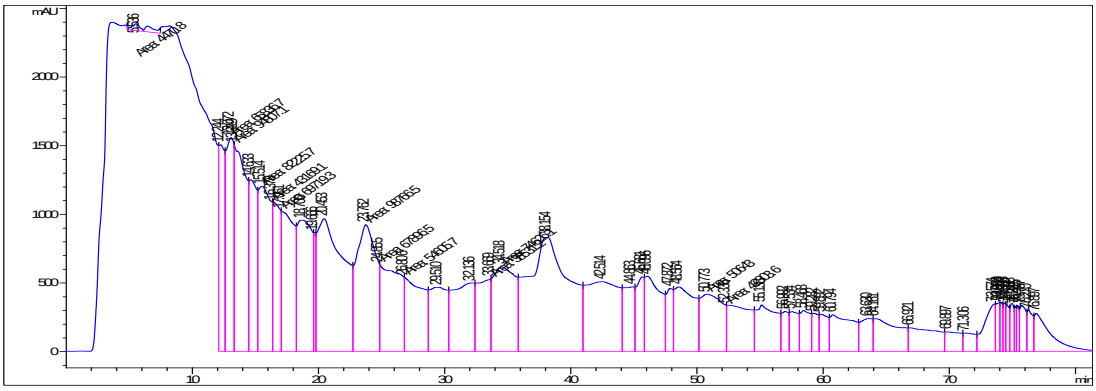

Figure 9.1t. HPLC Chromatogram of amino acids content of *Odonata* sp. (Jujaimala)

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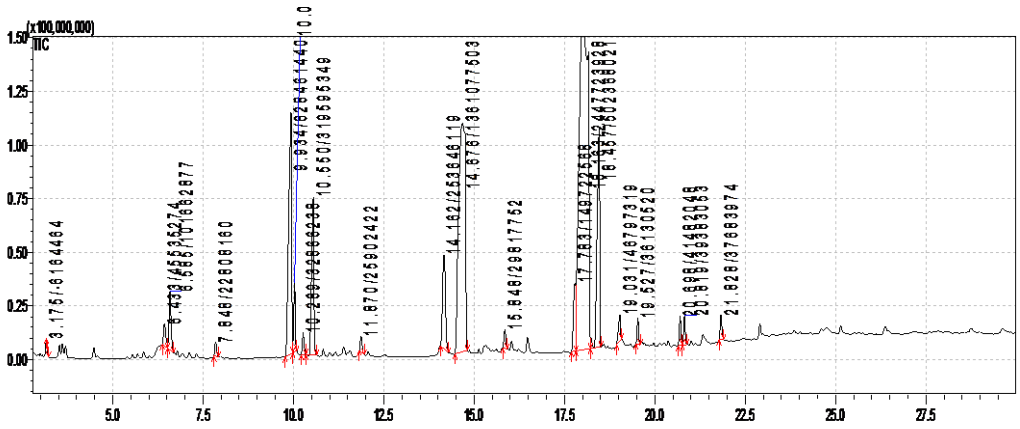

Figure 9.2a GC chromatograph of fatty acid analysis *Vespa affinis*

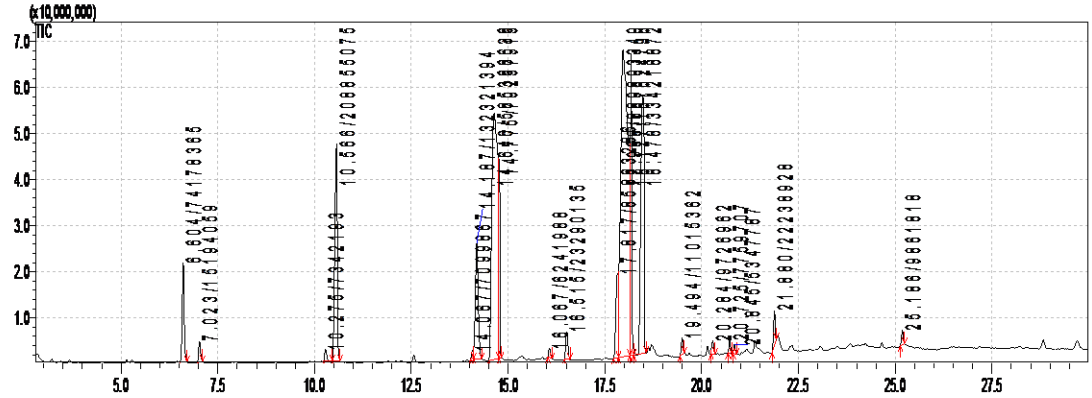

Figure 9. 2b GC chromatogram of fatty acid analysis of *P.olivaceus.*

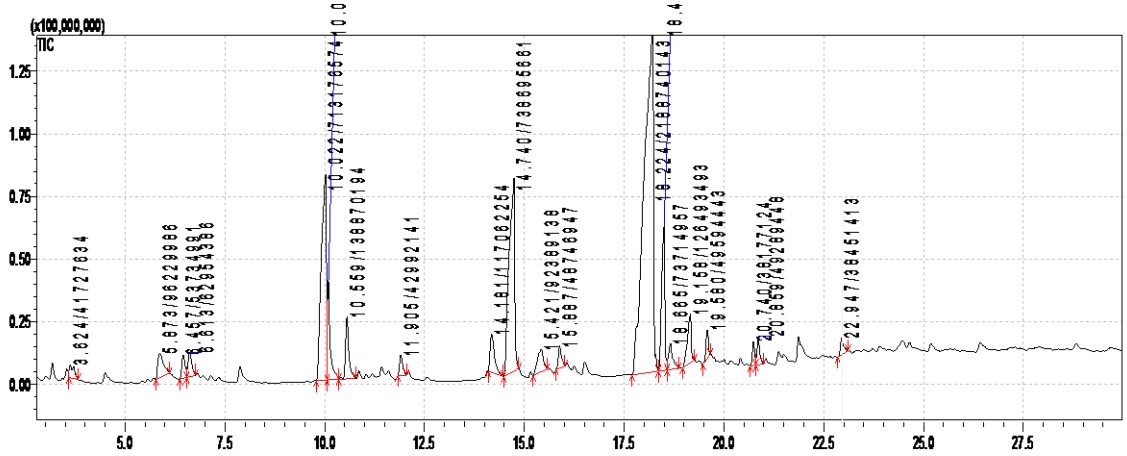

Figure 9.2c GC chromatogram of fatty acid analysis of *Parapolybia varia.*

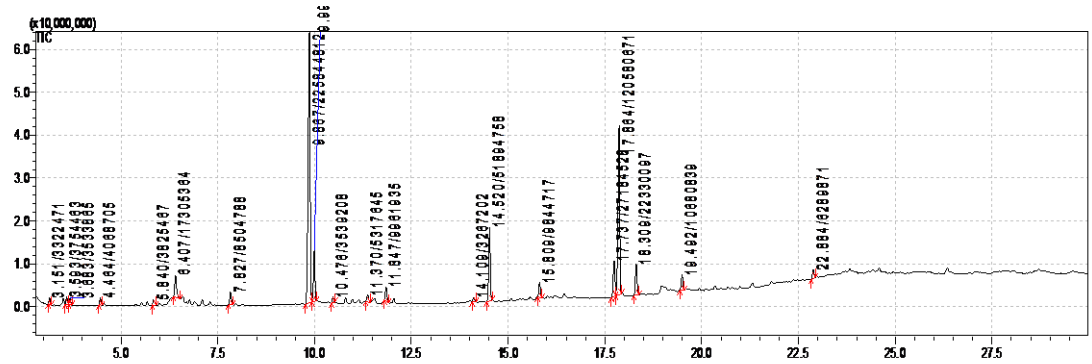

Figure 9.2d GC chromatogram of fatty acid analysis of *Oecophylla smaragdina*

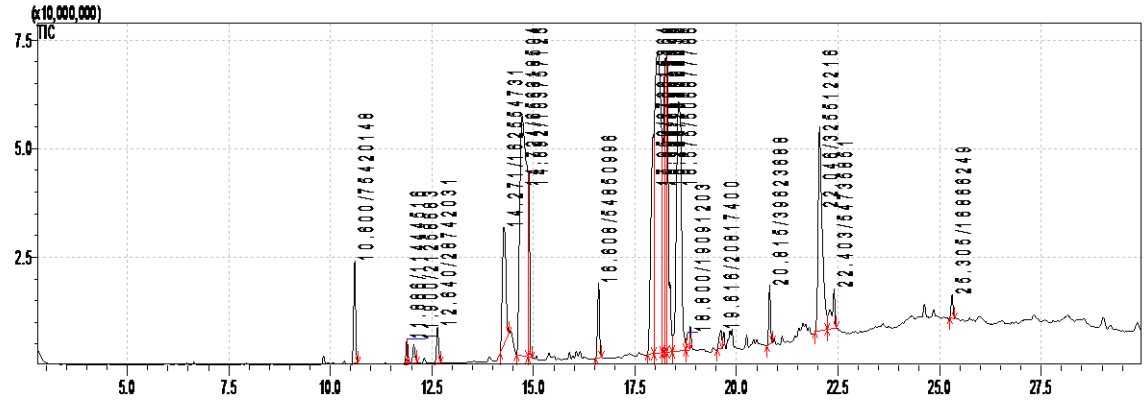

Figure 9.2e GC chromatogram of fatty acid analysis of *Lethocerus indicus*

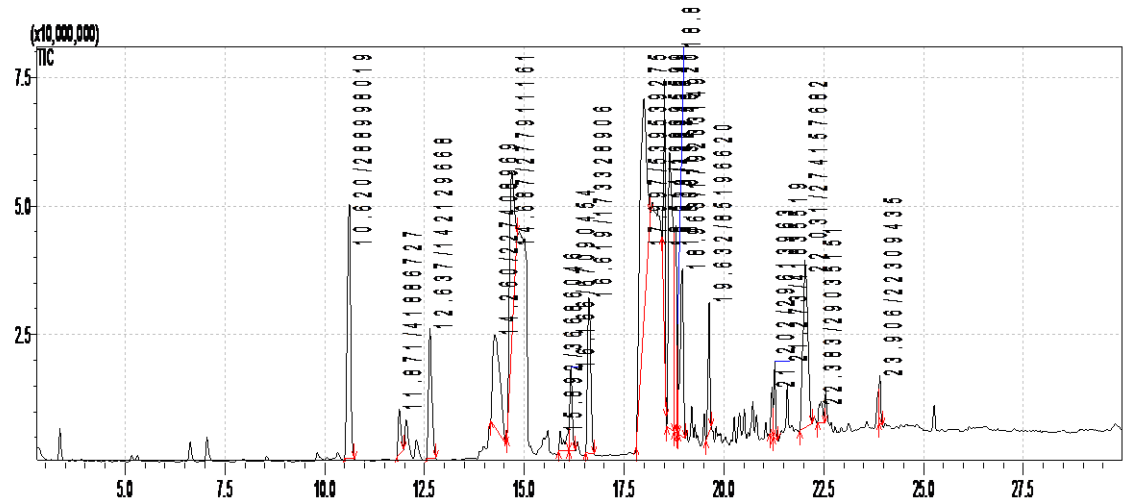

Figure 9.2f GC chromatogram of fatty acid analysis of *Tarbinskiellus portentosus*

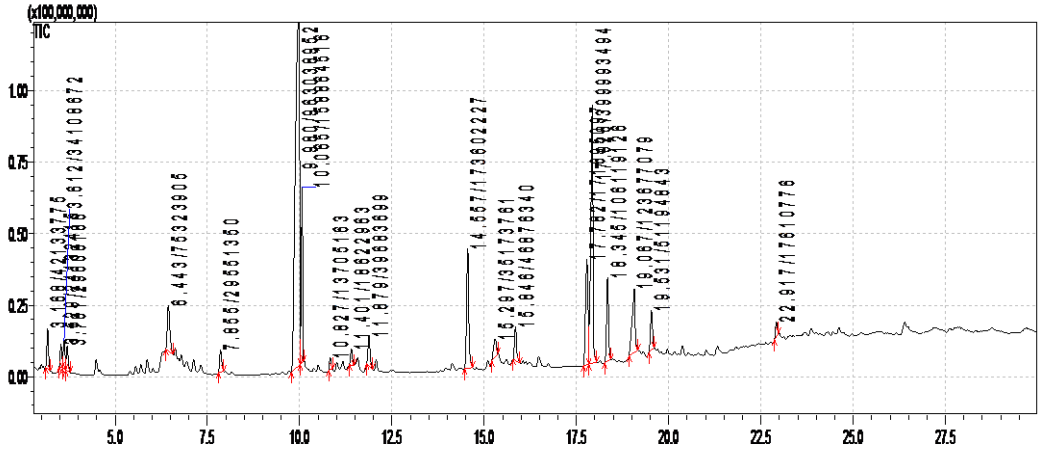

Figure 9.2g GC chromatogram of fatty acid analysis of *Eupreponotus inflatus*

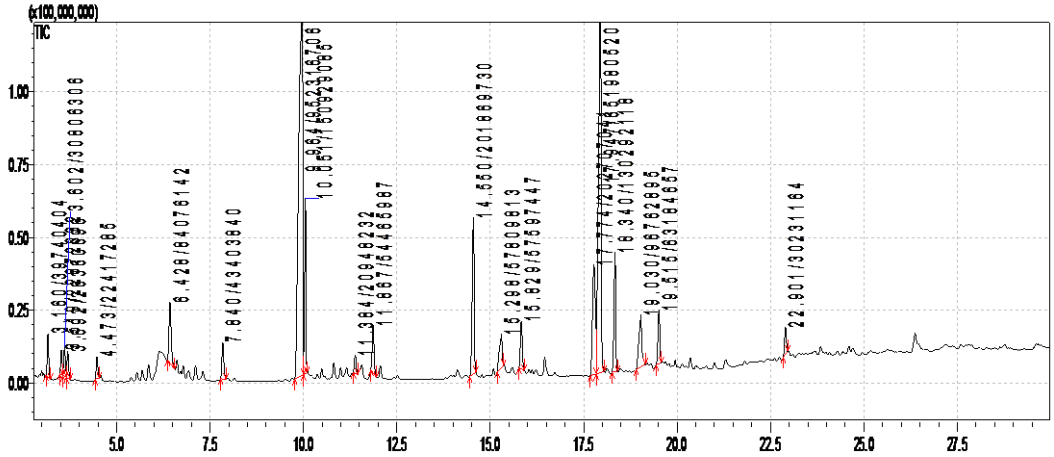

Figure 9.2h GC chromatogram of fatty acid analysis of *Choroedocus robustus*

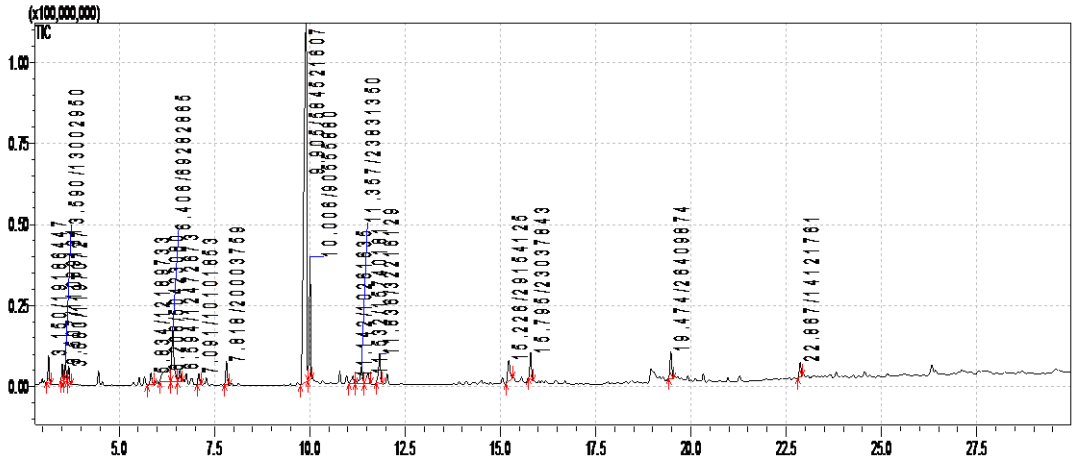

Figure 9.2i GC chromatogram of fatty acid analysis of *Chondracris rosea.*

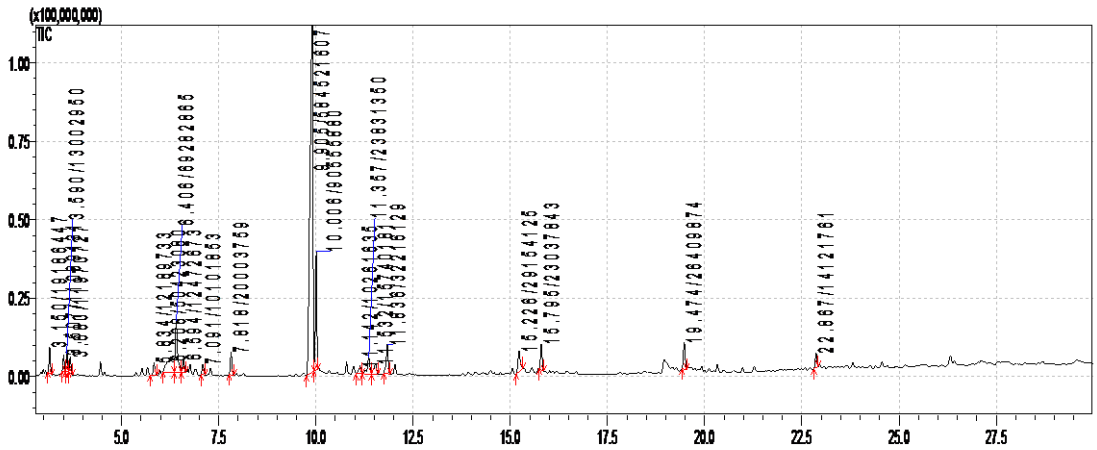

Figure 9.2j GC chromatogram of fatty acid analysis of *Oxya fuscovittate*.

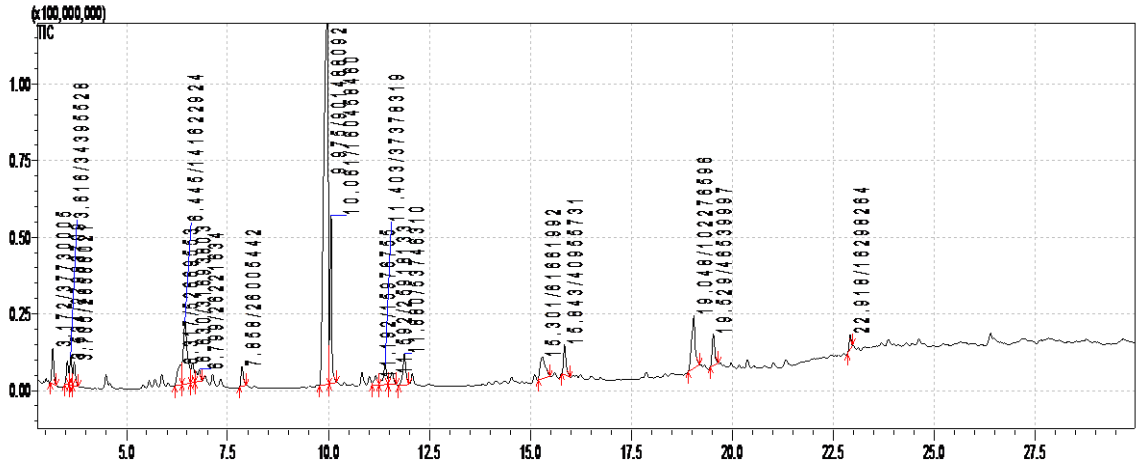

Figure 9.2k GC chromatogram of fatty acid analysis of *Mecopoda elongata elongata.*

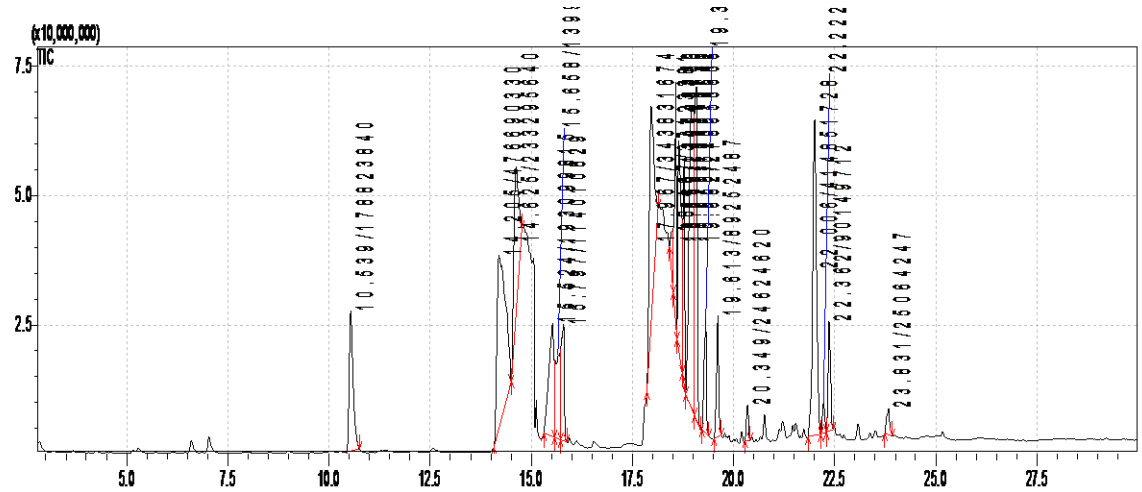

Figure 9. 2l GC chromatogram of fatty acid analysis of *Ruspoliya baleyi*

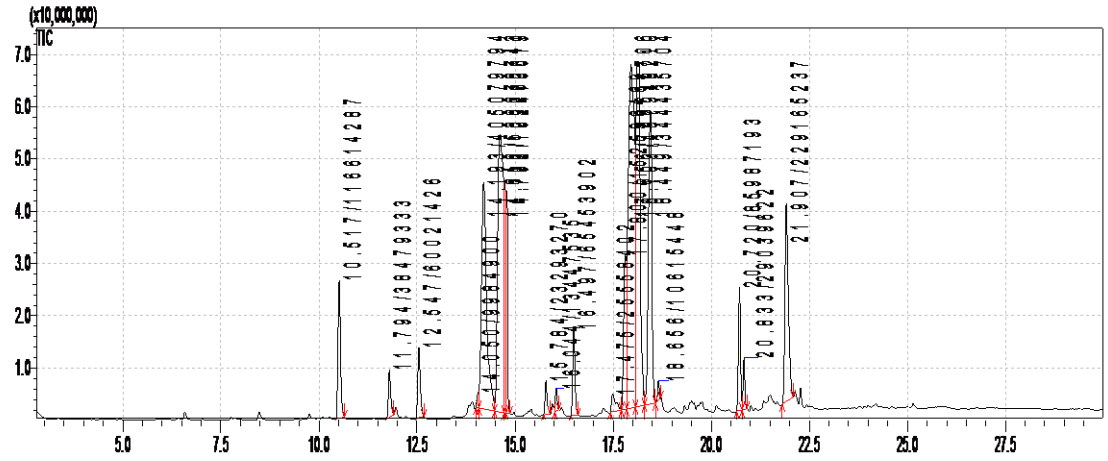

Figure 9.2m GC chromatogram of fatty acid analysis of *Cybister tripunctatus*

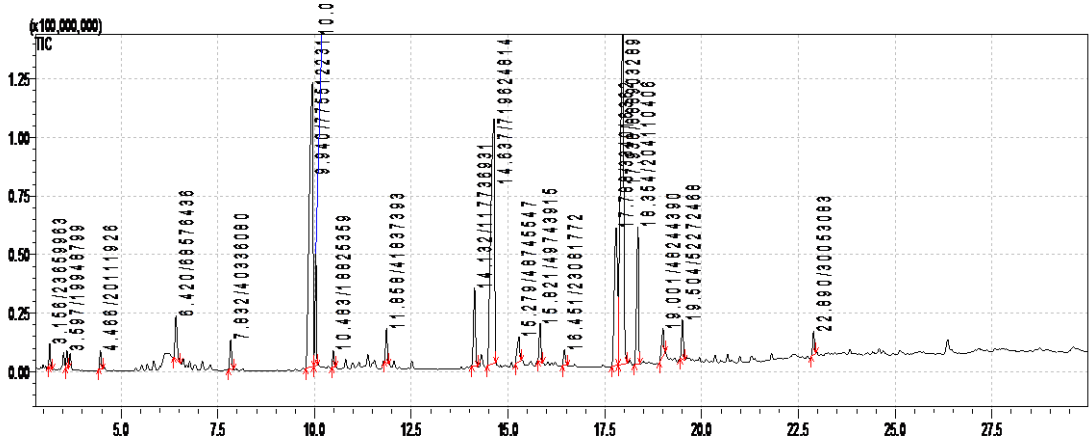

Figure 9.2n GC chromatogram of fatty acid analysis of *Coleoptera* sp. (Bwrbila gedet)

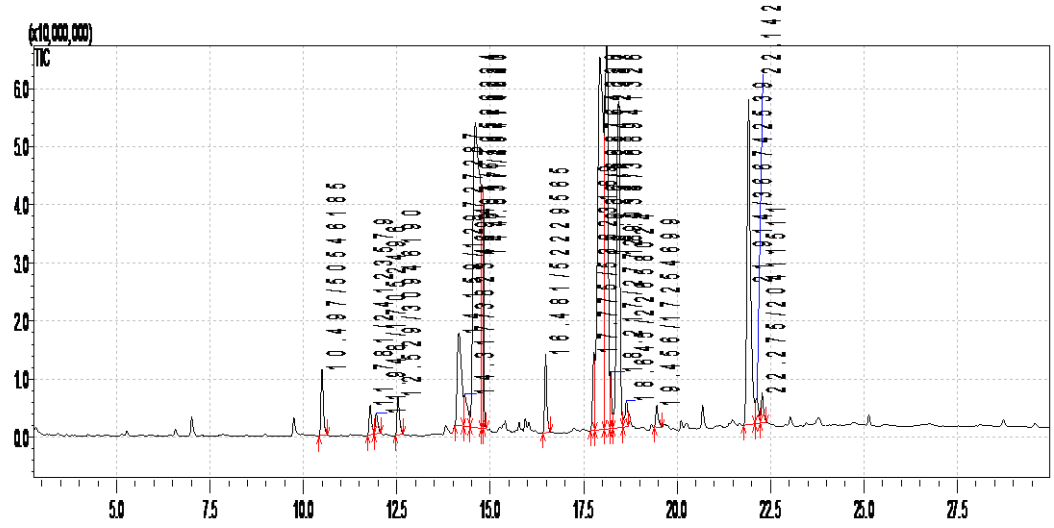

Figure 9.2o GC chromatogram of fatty acid analysis of *Coleoptera* sp. (Bwrbila fisa)

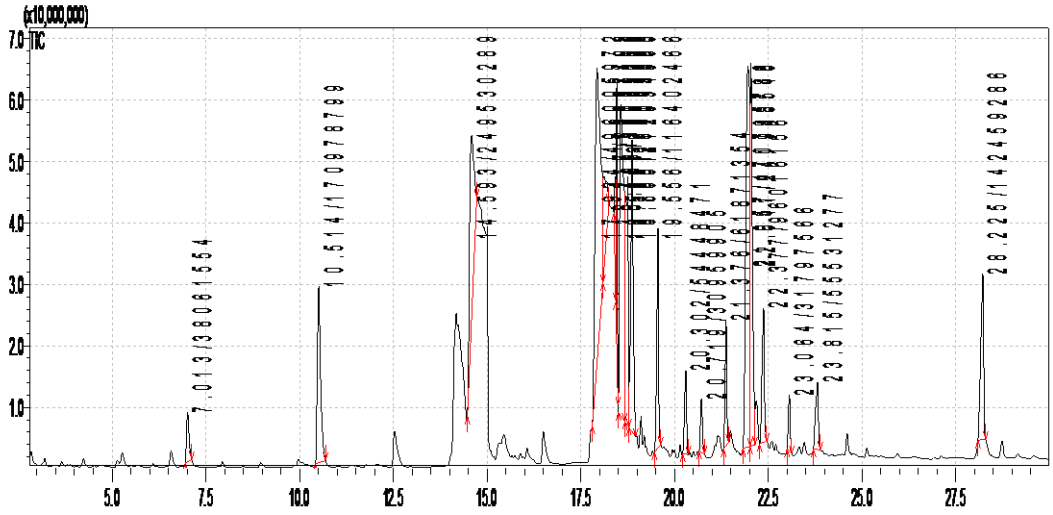

Figure 9.2p GC chromatogram of fatty acid analysis of *Macrotermes* sp.

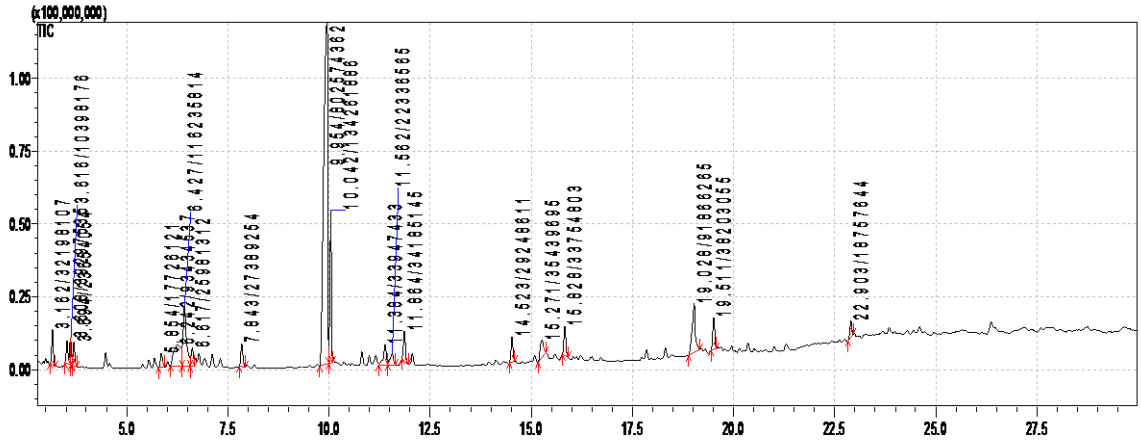

Figure 9.2q GC chromatogram of fatty acid analysis of *Nephila* sp.

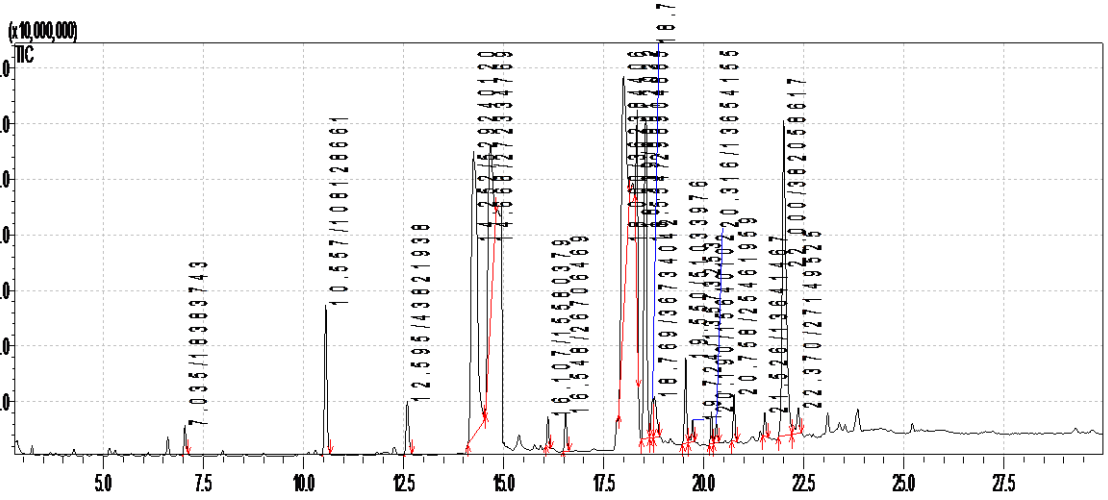

Figure 9. 2r GC chromatogram of fatty acid analysis of *Lepidoptera* sp. (Gunjet).

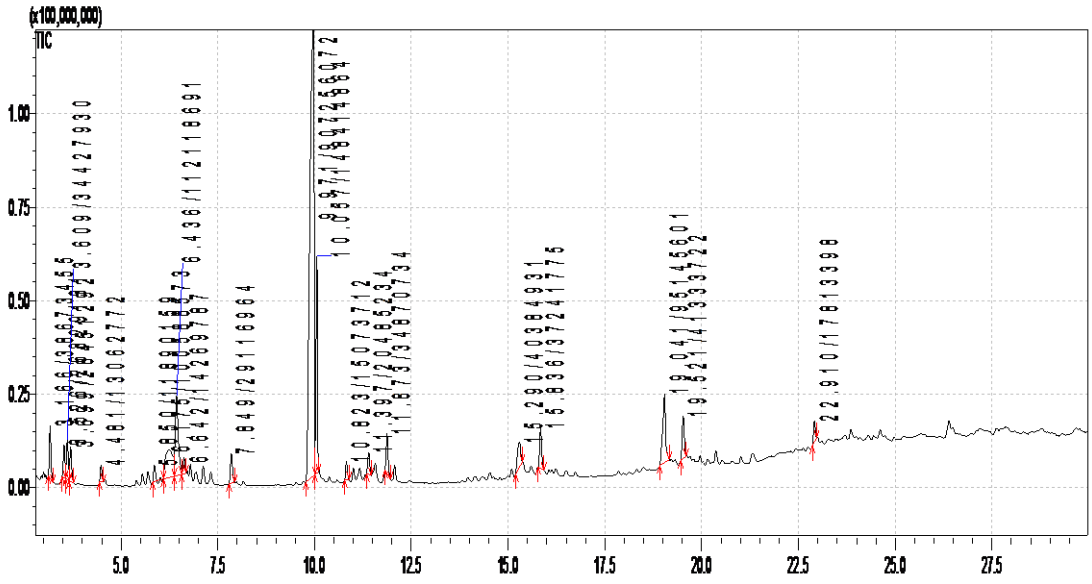

Figure 9.2s GC chromatogram of fatty acid analysis of *Odonata* sp. (Garba fangthe)

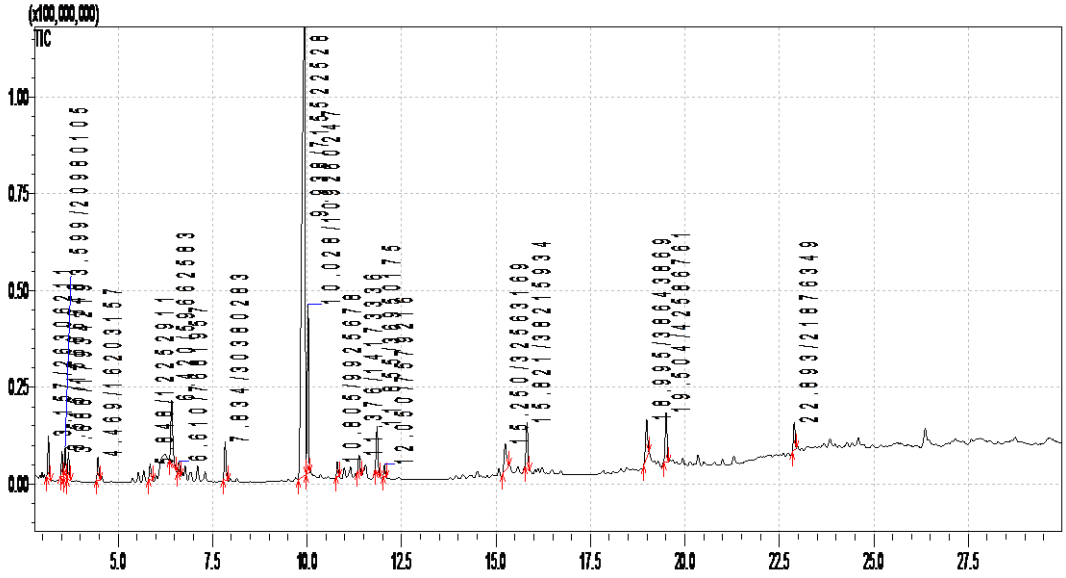

Figure 9.2t GC chromatogram of fatty acid analysis of *Odonata* sp. (Jujai Mala)

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A study on the prevalence of entomophagy among the Bodos of Assam

Silistina Narzari, Jatin Sarmah

Abstract
Entomophagy is a common practice among rural and urban Bodos - a major tribe of Assam, India. A survey was conducted in the remote rural areas of Assam from June, 2013 to May, 2014. The insects collected from various habitats were preserved by following standard methods. An inventory on the knowledge on the wild edible insects of the Bodos of the studied areas is presented here. The study revealed that a total of 25 species of insects, belonging to eight orders and fourteen families are consumed as food by the Bodos. Out of them ten species belong to order Orthoptera, five to the Hymenoptera, three to Coleoptera, two each to Odonata and Hemiptera and one each to Araneae, Lepidoptera and Isoptera. The ethnozoological knowledge of this tribe ranges from edible to medicinal

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Original Research Article

Proximate Composition of Wild Edible Insects Consumed By The Bodo Tribe Of Assam, India

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Abstract: A study was conducted on twenty species of wild edible insects consumed by the Bodo tribe of Assam of Northeast India to know their nutritive value by following standard methods. Total solids, carbohydrates and calorific values were calculated and estimated from the result of proximate analysis of crude fat, crude protein, moisture and ash content. The results indicated that the wild edible insects contain crude protein ranges between (30.25%-84.56%), crude fat (4.01% - 40.65%), moisture (2.91% - 8.87%), ash (0.48% - 7.93%), carbohydrate (1.58%-47.98%) and total solid (91.13% - 98.6%) on dry weight basis. The study revealed that insects are a rich source of nutrients with highest amount of proteins (84.56%) in *Nephila maculata* and lowest amount (30.25%) in *Ruspoliya Baleyi*. This study suggests that entomophagy is a healthy practice and hence it should be encouraged.

Key words: Bodo tribe; Edible Insects; Entomophagy; Nutritional Value; Proximate

Introduction

Insects are common food among the Bodo them to select deficient diets [14]. Making sure that we

11th INTERNATIONAL FOOD DATA CONFERENCE

Food Composition and Public Health Nutrition

November 3 - 5, 2015

In association with

Food and Agriculture Organization of the United Nations

International Network of Food Data Systems

Indian Council of Medical Research

This is to certify that

Mrs. Silistina Narzari

delivered an Oral Presentation at the 11th International Food Data Conference entitled: A study on entomophagy among the Bodo tribe of Assam, India

3rd to 5th November, 2015

National Institute of Nutrition (ICMR), Hyderabad, Telangana State, INDIA.

U Ruth Charrondiere

T. Longvah