CHAPTER 2
The Hamei used for the present study is prepared by 2 types of Rice varieties i.e. local rice variety (Moirangphou) and imported rice (Superfine). In both cases shade dried bark of *Albizia myriophylla* was used. The chemical analysis of the fermented Hamei is performed in the Hamei which is prepared with local rice Moirangphou (except in one comparative study where superfine was used).

The improperly husked Moirangphou Rice and Shade dried Yangli barks were ground into fine powder by means of a grinder and made into powder and used for the preparation of Hamei.

**PREPARATION OF HAMEI:**

a) 1 gm. of the powdered rice.

b) .25 gms. of the bark of *Albizia myriophylla* (infragments).

c) 10 ml of sterile water.
One gram of the powdered rice is properly mixed with .25 gms. of fragmented barks of Albizia myriophylla and made in the form of paste by using sterile water. From the paste we prepare small rounded cakes of our convenient size (usually varies from 1-8 cm broad & 1-1 cm thick).

The cakes so prepared are kept into petridishes which are usually sterilized at 60°C for 24 hours. The petridishes which are with Hamei are kept into B.O.D. Incubator. A constant temperature of 28+2°C were maintained during the research period. The Hameis are considered fermented when an alchoholic smell appears and it generally happens on the 5th day under Laboratory condition and on the 8th day under ordinary normal condition. The 5th day fermented Hamei were taken out and dried in the shade. The dried Hameis are ground into fine powder and used for chemical analysis.

The methods used during the experiment are as follows. Total Nitrogen was estimated by steam distillation method of Markham (1942). Nitrate and Nitrite are determined by Fudge and Truman (1973) with some modifications. Protein was estimated by Lowry et al.

For studying the carbohydrate substances, the following methods were employed, starch - Mahadevan & Sridhar (1986). Total soluble sugar Anthrone method of Dubois et al (1951). Reducing sugar - Nelson's modification of Somogyi method (Nelson 1944) Non-reducing sugar by subtracting the value of reducing sugar from that of total sugar and qualitative and quantitative determination of reducing sugar B.A. Lewis & F Smith in Gas - Stahl (1969).

Vitamin - Thiamine by Acid dye method of Peach and Tracey (1955 b).

The alkaloids are extracted by ethanol. After removal of the ethanol, the residue were treated with dilute aqueous acid to remove resins and fatty materials.

The enzyme activities were performed in freshly prepared and 5th day fermented Hamei. The activities of
Invertase, Amylase & Protease were determined following the methods described in Mahadevan & Sridhar (1986).

The isolation identification of micro-organism involved during the fermentation of Hamei were undertaken following the methods of Salle (1971), Buchanan & Gibbons (1974) and Barnett et al. 1983 respectively.

The above mentioned methods are being described in detail in the subsequent chapter where the respective experiments are undertaken.