More than a century ago Losch (1875) discovered the dysentry amoeba in the stools of a Russian patient, which was later named as Entamoeba histolytica by Schaudinn (1903). The first successful cultivation of E. histolytica was done by Boeck and Drbohlav (1925) on slants of inspissated whole egg overlaid with serum - glucose - Locke solution (L.E.S. medium).

Since the time of Boeck and Drbohlav (1925) highly complex and rich nutrient media such as hen's egg, serum, whole blood, various organ extracts among other substances, have been used for the in vitro cultivation of E. histolytica and other anaerobic amoebae.

All the culture media so far developed for growing anaerobic amoebae either with a single species of bacteria or with mixed bacterial flora, are nutrient media which encourage the growth of mixed bacteria that produce harmful metabolic products including ammonia, methane, H₂S etc. These products are deleterious for isolation and growth of anaerobic amoebae.

A few workers have used the solid nutrient media for cultivation of E. histolytica (Balamuth and Brent, 1954; Youssef, 1965 a, b; Myjak, 1971). No attempt has been made to grow anaerobic amoebae on non-nutrient agar surface.
Present study was planned to develop a new culture system for cultivation of anaerobic amoebae i.e.; *E. invadens*, *E. moshkovskii*, *E. ranarum* and *E. histolytica* on non nutrient agar in Brewer's anaerobic Petri dish under anaerobic conditions.

The second purpose of the study was to develop a method for successful isolation of *E. histolytica* from faecal samples using non nutrient agar and *Escherichia coli* + rice starch as food.

Special attempt was made to study the role of oxidation-reduction potential, effect of removal of carbon dioxide, effect of pH, effect of rice starch and cholesterol, on growth of anaerobic amoebae. Deleterious effect of free ammonia gas on *E. invadens*, *E. moshkovskii* and *E. ranarum* was also studied. Studies were conducted on the effect of dyes (acriflavin and gentian violet) on the suppression of trichomonads, blastocystis and starch splitting bacteria. Suitability of bacterial food for cultivation of amoebae was also studied.

The present thesis reports the results of the above studies and gives the first rational approach since the time of Boeck and Drbohlav (1925) for the isolation and culture of anaerobic amoebae and for the study of bacterial and other factors affecting the growth of amoebae.
This will be the most satisfactory culture method for the diagnosis of *E. histolytica* in faecal samples and may reveal *E. histolytica* infection where microscopic examination has failed.