INTRODUCTION AND AIM OF THE WORK

Diarrhea may be defined as the passing of liquid or watery stools more than three times in a day; however, it is the consistency rather than the number of stools, what is the more important feature, frequent passing of formed stools can not be considered as diarrhea.Breast fed babies often pass loose "pasty" stools;this also is not diarrhea. Diarrhea may be acute lasting hours or days or chronic lasting weeks or months **(WHO, 1984a)**.

Diarrhea is a clinical syndrome of diverse etiology, associated with loose or watery stool and often vomiting and fever. It is symptom of bacterial, viral and parasitic enteric agents **(Benenson, 1985)**.

Diarrheal diseases are one of leading causes of childhood mortality and morbidity in the developing counteries, and a major contribution to malnutrition.

Accurate data on the global extent of the problem are difficult to obtain, but a recent analysis of the finding of 22 active surveillence studies conducted for one year or more suggest around 750 million children below 5 years of age in Asia, Africa and Latin America suffer from acute diarrhea each year, from the same study, it is estimated that between 3 and 6 million in this age group die

annually from acute diarrhea, 80% of these deaths occur in the first 2 years of life. Such repeated attacks of diarrhea,lead to malnutrition and growth retardation because of associated restriction by mothers, anorexis and malabsorption **(Hamilton, 1979).**

Diarrhea disease is known to be one of the most important cause of child morbidity and mortality in Egypt **(Nasser-Shafik et al., 1985).**

It has long been recognized that the breast-fed infant is better protected against infections and particularly diarrheal diseases and has better chance of survival than bottle-fed baby. Only fairly recently have reasons for this difference been established. These are :

Breast milk is clean, it is never strictly sterile, as there will be some contamination from the nipple.However, these bacteria have no time to multiply as the milk is drunk immediatly.

Immunoglobulins, mainly IgA, are present in large amounts in colostrum and to lesser extent in mature human milk.IgA is not absorbed but acts in the intestine against certain bacteria (e.g. E. coli) and viruses. Lysozyme, an enzyme, is present in a concentration several thousand times higher than that found in cow's milk, this breaks down certain harmful bacteria and also protects against various viruses.

White blood cells, during the first two weeks, breast milk contains up to 4000 cells per ml. These cells appear to secrete IgA,lactoferrin, lysozyme and interferon.Interferon is substance which may inhibit the activities of certain viruses **(Cameron and Hofvander, 1983).**

The aim of the study is to estimate IgA in stools and serum of the infants complaining of acute and persistant diarrhea and compare the result of the breast-fed and bottle-fed infants.