# INTRODUCTION AND AIM OF THE WORK

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The oral rehydration solution has been successfully used in many countries over the last decade for the treatment of dehydration due to diarrhea of different etiology **(Mahalanabis, 1985).**

According to the WHO, the formula of the solution is formed of 20 grams glucose, 3.5 grams sodium chloride, 2.9 grams trisodium citrate and 1.5 gram potassium chloride contained in one liter of water **(WHO, 1983a).**

Glucose mediated enhanced sodium absorption forms the basis of oral rehydration therapy in diarrhea **(Hirschhorn, 1980).**

The oral rehydration solution as such has many advantages over the previously used intravenous therapy. The solution is much less expensive, easily administered, reduce hospital case and benefit of the active participation of the mothers. It also limits the weight loss associating diarrhea particularly with active feeding after diarrhea **(Laurence, et al., 1982).**

In spite of all these advantages, there is a recognized drawbacks in the use of the oral hydration solution, that it doesn't reduce the volume, frequency or duration of diarrhea.

This phenomenon forms a problem to the mothers who are anxious for the prevention of diarrhea as Sooner as possible. In addition to this, the severity and long duration of the diarrhea will limit the benefit of a liberal and more effective feeding **(Mahalanabis, 1985)**.

Owing to these drawbacks, trials are made to improve oral rehydration solution based on optimum exploitation of water-soluble organic molecules linked sodium and water absorption and also to reduce endogenous secretions into the small intestine. This will result in reduction of the volume and duration of diarrhea. All these various trials are based on the fact that there are three groups of organic solutes which are absorbed efficiently and relatively independently of each other by the small intestine and in doing so enhance the absorption of sodium and water such as saccharides, neutral amino acids, di-and tripeptides **(Mahalanbis, 1985)**.

Of all cereal crops, rice flour has been reported to be the most suitable for this purpose due to the following reasons :-

1- The starch of rice is the most efficiently digested and absorbed compared to the starches of other cereals **(Mahalanabis, 1985)**.
2- Protein of rice is comparable to animal protein, since it contains almost most the essential amino acids nessary for growth **(Patra et al., 1984)**.

3- Rice protein do not appear to give rise to allergic reactions (**Patra et al., 1984**).

4- Rice flour is a less expensive by product of rice milling obtained by grinding broken rice.

Many trials has been made to include rice powder in the oral rehydration solution and most of which recommend the use of this powder to improve the quality of oral rehydration solution.

The present investigations aiming to evaluate the efficacy of a rice powder based oral rehydration solution and to compare that with the traditionally used WHO oral rehydration solution. This evaluation is done on infants and children with acute diarrheal attack either breast or artificially fed.