I. SOLUBILITY OF SUCROSE

INTRODUCTION

The solubility of sucrose in molasses is of considerable importance in the sugar industry. It has a direct interest in that the solubility relationships determine the amount of sugar which can be recovered by crystallisation. Apart from this, the rate of crystallisation and the rate of nucleation are both functions of the supersaturation of the solution, the latter being calculated using the solubility value for the solution.

In studying the problems of solubility, crystallisation and nucleation, work can be carried out using either molasses or pure solution of known composition. The present work deals with the application of a new method of determining solubilities. Unfortunately this method is not suitable without modification for use with molasses, and the work has therefore been confined to pure solutions. Few reliable data exist however, even for pure solutions, so that there is need for considerable work in this field.