FOREWORD.

All the results of this work are based on chloride determinations. During the experiments it was observed that the Chloride % Brix figures varied greatly. The clarified juice figures usually showed the highest Chloride % Brix. Such variation was contrary to all previous work of the same kind, carried out by the Department and no explanation other than faulty chloride determinations could be given.

The fault either lay in the method of sampling, or the actual chloride determination. It was experimentally proven that the sampling method was faultless.

The chloride apparatus has subsequently been checked and tested. Results show a variation, which cannot be accounted for.

It must be concluded that all chloride determinations in this work are erroneous, and hence the entire results cannot be analysed. They will merely be recorded for any future reference.

I. INTRODUCTION.

A general survey of inversion and destruction of solids during clarification, evaporation and crystallization was done by Foster. The subsequent investigation, by Dunlop, was confined to evaporation and crystallization. Of thse results the more promising were concerned with evaporation. Barrera and Badley recently did a detailed investigation of inversion during clarification, which produced no startling results.

It seemed clear, therefore, that the next development should be a detailed investigation during evaporation.

This work was of such a design. Its aims were to secure data of inversion and destruction of solids, in each individual evaporator vessel.