

DETERMINATION OF FRUIT CONTENT IN THREE TYPES OF SINGLE FRUIT CORDIALS

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The chemical parameters of three fresh fruits namely, mango, pineapple and passion fruit and of their respective cordial samples of known fruit content made in the laboratory were examined with an idea of applying the findings to determine the fruit content of commercially manufactured fruit products. Several popular commercial samples were also analysed for their chemical parameters to ascertain whether their fruit content can be determined using these results.

Although wide variations were observed in the composition of the individual fruits of the same type, there were highly significant correlations between many pairs of parameters of the fresh fruits and their corresponding laboratory cordial samples. For all three fruits the total ash, total phosphorous and water insoluble matter were reduced to one third of their initial values when the respective cordials were prepared, while the percentage dry matter content increased by almost three fold.

Of the twenty parameters selected to assay the commercial samples, it was observed that only ash, potassium, phosphorus and water insoluble matter, with less than

30% variations, could be used with confidence as indices for the determination of fruit content. Major fruit constituents such as sugars and acids are poor indices as they are legitimately added as ingredients. This also applies to potassium which can be added with the preservatives.

The best indices were subjected to a simple statistical treatment to ascertain, their probable limits and to apply this method to market samples.

This project is sponsored by NARESA

References

1. Ryan J.J. and Dupour J.A. (1983) *JAQAC* 56 743
2. Lifshitz, A. and Brown, M.B. (1974) *JAQAC* 57 1169