SUMMARY

1. Foodstuffs as consumed by the people of Chhattisgarh region of Madhya Pradesh State have been analysed for their zinc, copper, chromium and cadmium content. 23 varieties of rice, which is the staple food of local people, were analysed. Loss in mineral content during polishing of rice, refining of wheat flour and sugar have been determined. Water from three different sources have also been analysed for the above elements.

The data on foodstuffs (Table 9-12) embodied in the Thesis seem to have some utility in human nutrition and health and may be fruitfully utilized in planning a balanced diet or in dietary modification which is an important factor in the prevention and treatment of many diseases.

2. Studies on bioavailability of the above mentioned trace elements have been made in six female subjects of age group 20-30 years. The intake of these elements through diet and water and excretion through urine and faeces have been computed (Tables 13-18). In case of all these elements a positive balance has been observed (Tables 19-22). It appears that equilibrium is established at some later age.
3. Concentration of zinc, chromium and cadmium has been measured in the whole blood of 15 diabetics, 15 hypertensives and 15 normal subjects. A perusal of data (Tables 23-25) reveals a decline in the zinc and chromium levels in diabetics while an elevated cadmium level has been observed in case of hypertensives. A decline in the hair chromium has also been observed in case of 10 diabetics (Table 26). This part of the investigation was undertaken in an attempt to correlate the above trace elements with two common disease states - diabetes mellitus and hypertension.