

VI. SUMMARY

Simultaneous measurement of ^{55}Fe and ^{59}Fe can be conveniently counted by liquid scintillation counter and has its only main problem of counting ^{55}Fe .

Before measurement, a suitable scintillant mixture is chosen and the sample appropriately prepared.

The fluors (PPO plus POPOP) are dissolved in toluene and added with gel (Triton X-100).

A sample as whole blood containing both isotopes is treated by strong acids and decolourised by perchloric acid. The inorganic iron is precipitated in the form of ferric hydroxide. The precipitate is eventually reduced by ascorbic-hydrochloric acids and ferrous ascorbate is obtained as a colourless solution free of any quenching impurities.

By the same principle as pulse height analyzer, the measurement by liquid scintillation counter is adjusted for the energy levels of ^{55}Fe and ^{59}Fe by varying the attenuations. The net countings of ^{55}Fe will be the result of total minus those contributed by ^{59}Fe in the energy region of ^{55}Fe .

The procedure and method of measurement were applied for the investigation of iron absorption from the Thai diets. The results obtained were satisfactory.