As a component of circulating thyroid hormones, 3,5,3'-triiodothyronine is present in a very small amount in the serum estimating about 5 per cent of serum T₄ or of serum PBI. The low concentration of this iodocompound in the human serum makes it difficult to be detected by chemical means. We have attempted to separate T₃ from T₄ in human serum by thin-layer chromatography after appropriate extraction. The method has been modified after Nauman, et al., 1967. Ten millilitres of serum from thyrotoxic patient was extracted and proteins, lipids and salts were removed by methanol, chloroform and gel filtration respectively. The serum extract was applied to TLC using (t-amyl alcohol:t-butanol:6N NH₄OH:acetone, 10 : 10 : 20 : 80 v/v) as the solvent system. The Rf values are consistently found to be 0.315 for T₄ and 0.414 for T₃. In cases of hyperthyroidism, the spots of T₃ can be detected after spraying with FFCA without addition of stable T₃ standard carrier. The serum of endemic goitre patients from Wang Poong, Prae, and mostly of normal serum showed no evidence of detectable T₃ spot in the chromatography. The absence of T₃ demonstrated as a spot in the TLC of the serum of these patients was documented.
NAME: Nongnuch Phasuk
DATE OF BIRTH: November 10, 1940.
PLACE OF BIRTH: Petchburi, Thailand.
INSTITUTIONS ATTENDED:
Srisuriyothai School, Bangkok.
March, 1957.
Certificate of Mathayom VI.
Srisuriyothai School, Bangkok.
March, 1959.
Certificate of Mathayom VIII.
Chulalongkorn University, Bangkok.
Department of Chemistry, Faculty of Science.
March, 1966.
Bachelor of Science (B.Sc.)