CHAPTER III

PURPOSE OF INVESTIGATION

Previous Investigation

Previous investigations (20,31-33) suggested that the individual alkaloids from *S. ignatii* Berg. belonged to the corresponding strychnan type alkaloids such as strychnine 54 and brucine 55 accompanied with their pseudo, N-oxide or N_b-methyl-*sec*-pseudo derivatives. The investigation of the stem bark of the various forms of *S. ignatii* Berg. (20) demonstrated that the alkaloids compositions were very variable. Some samples might contain only strychnine 54 as a main compound while the others contained either no alkaloid or only brucine 55 or both strychnine 54 and brucine 55. Some speciemen contained either brucine 55 or pseudobrucine 66 as the main alkaloids too. Diaboline 47 has also been recognized in the leaves and fruits of the specimen collected in Western Malaysia. The N_b-methyl-*sec*-pseudo alkaloids were only found in the leaves, fruits and seeds but only in small amount.

More recent investigation on the root bark of *S. ignatii* Berg.(34,35) has observed the presence of several minor components which gave blue colour with the

ferric chloride perchloric acid reagent. One of them was isolated and identified as longicaudatine 119, which belong to a new type of Bisindole alkaloid.

The alkaloids previously found in S.ignatii Berg. are already set out in Table 3 (page 55-56) and their structures are demonstrated under Table 2 (page 25-53).

Purpose of the Present Investigation

The present investigation has carried out mainly to isolate the alkaloid bases from the stem bark of S.ignatii Berg. with the hope to gain more informations about the plant alkaloidal composition.

On the previous works, the isolated monomeric alkaloids seem to possess only strychnan skeleton type, however the present investigation is carried out with the expectation to isolate the different alkaloids skeletons type rather than the routine strychnan type. Furthermore, the present investigation is also aiming at the isolation of some bisindole alkaloids.

It is hoped that, this investigation would provide some informations which enabling explanation concerning the alkaloid distributions, the chemotaxonomic and the biosynthetic relations among the indole alkaloids.

Moreover, some isolated alkaloids from the plant would lead to the establisment of the structure and pharmacological or toxicological activities relationships which at one time is still unexplained.