1. INTRODUCTION

Cyanobacteria are prokaryotic aquatic bacteria that obtain their energy through photosynthesis. They are often referred to as *blue-green algae*, even though, it is now known that they are not related to any of the other algal groups, which are all eukaryotes. Unlike bacteria, which are heterotrophic decomposers of the wastes and bodies of other organisms, cyanobacteria contain the green pigment chlorophyll (as well as other pigments), which traps the energy of sunlight and enables these organisms to carry on photosynthesis. Cyanobacteria are thus autotrophic producers of their own food from simple raw materials. Cyanobacteria are found in almost every conceivable habitat, from oceans to fresh water to bare rock to soil. The paddy field ecosystem provides ***favorable*** environment for the growth of the nitrogen fixing cyanobacteria with respect to their requirements for light, water, high temperature and nutrient availability. Cyanobacteria grow in higher abundance in paddy soils than in upland soils **(Watanabe and Yamamoto, 1971)**.

Cyanobacteria produce the compounds responsible for earthy odors that commonly one can detect in soil and some bodies of water. Cyanobacteria have even been found on the fur of polar bears, to which they impart a greenish tinge. In short, cyanobacteria have no one habitat because in varied applications such as they can be found almost anywhere in the world.

Cyanobacteria are one of the potential organisms, which are useful to mankind in various ways. Cyanobacteria constitute a vast potential resource mariculture, food, feed, fuel, fertilizer, medicine, industry and in combating pollution **(Thajuddin and Subramanian, 2005)**.

The present study aims at monitoring (i) the survey of some cyanobacteria inhabiting the rice paddy fields, (ii) identifying the isolated cyanobacteria isolates (iii) estimating the ability of the isolated cyanobacteria

isolates for the growth under laboratory condition, (iv) evaluating their chemical constituents as a natural useful economic products.