PREFACE

In recent years, microbial process developments of various pharmaceuticals and nutraceutical products like CoQ10 have tremendous impact on human welfare and are largely beneficial for mankind and their living style.

Demand of CoQ10 is continuously rising due to growing cardiovascular disorders world-wide because of modern life style. CoQ10 is used in cosmetics (anti-aging) as well as supporting medicine in cardiomyopathy. However, it also reduces the risk after chemotherapy in cancer patient.

Presently, the demand for CoQ10 in the world market is high, and production is not compensating the demand of the same. The available wild-strains could not exploit commercially due to poor yield. So we emphasize on our research work on development of high yielding CoQ10 producer strain. Our aim of this project was to develop a precious strain of *P. denitrificans* with the help of various techniques for strain improvement. This new developed high yielding strain is further investigated for media, process condition optimization and for efficient down stream process which was further required for maximum production of CoQ10. Each step of upstream and downstream processes of CoQ10 production was studied and optimized to reduce the cost of total production. Our goal was to achieve economic microbial process and to attain maximum CoQ10.

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