

A) Details of Team Members
1. Team Member: T.S.S.Gomes
2. Details of Collaborator: Dr.W.M.G.Seneviratne, Director, Rubber Research Institute Thelawala Road, Rathmalana.
3. Places where the project was carried out: Rubber Research Institute- Thelawala Road, Rathmalana, Department of Mechanical Engineering -University of Moratuwa, Richard Peiris and Company – Nawinna, RPC Polymers – Horana Poruwadanda Industrial Estate, Lalan Rubbers (Pvt) Limited- Algama Road, Horagasmankada.
4. Project personnel i) Number of personnel employed: No paid personnel employed ii) Their status offer completion of the project: -
5. Final financial statement is attached: Yes
B) Executive summary of the project Natural rubber latex production of the world is lead and dominated by Asia Pacific Countries such as Thailand, Indonesia, Malaysia, Vietnam, China, India, Philippine, Cambodia, and Sri Lanka where altogether they contributes around 94%. But it was observed that the existing natural rubber latex production technology which is now older than 100 years- has amalgamated several problems such as uncontrollable wastage of latex, chemicals, ammonia, water, energy and labor. Further it is combined with complications such as discharge of waste by polluting environment, effects in employee's health, atmosphere degradation by excessive ammonia evaporations and unsatisfied labor attitudes due to difficult working conditions they faced. Therefore there is a global need to develop a new efficient and effective green technology for the natural rubber latex processing industries, which will minimize above material wastages, improve productivity and prevent adverse effects on the human and environment. The project carried out under the grant of National Science Foundation on "Scaling up the invention of Spherical Container for Natural Rubber Latex Industry" is an invented spherical tank and a process that can help natural rubber latex industries in saving their valuable resources and effects in enhance the environmental performances. The control tests of this project which carried out under the technical collaboration of Rubber Research Institute of Sri Lanka, by comparing conventional cylindrical tank and ecodesigned spherical tank revealed -the Percentage of latex saving on coagulated rubber as 42%, savings on Ammonia usage as 19.5% and savings on Labor usage as 59%. Therefore this project will enable the said natural rubber latex producing industries of Asia-Pacific countries to successfully address global change challenges through their scientific capacity development and will be a definite contribution for the sustainable development of future world natural rubber latex centrifuge industry linking to green production and consumption.