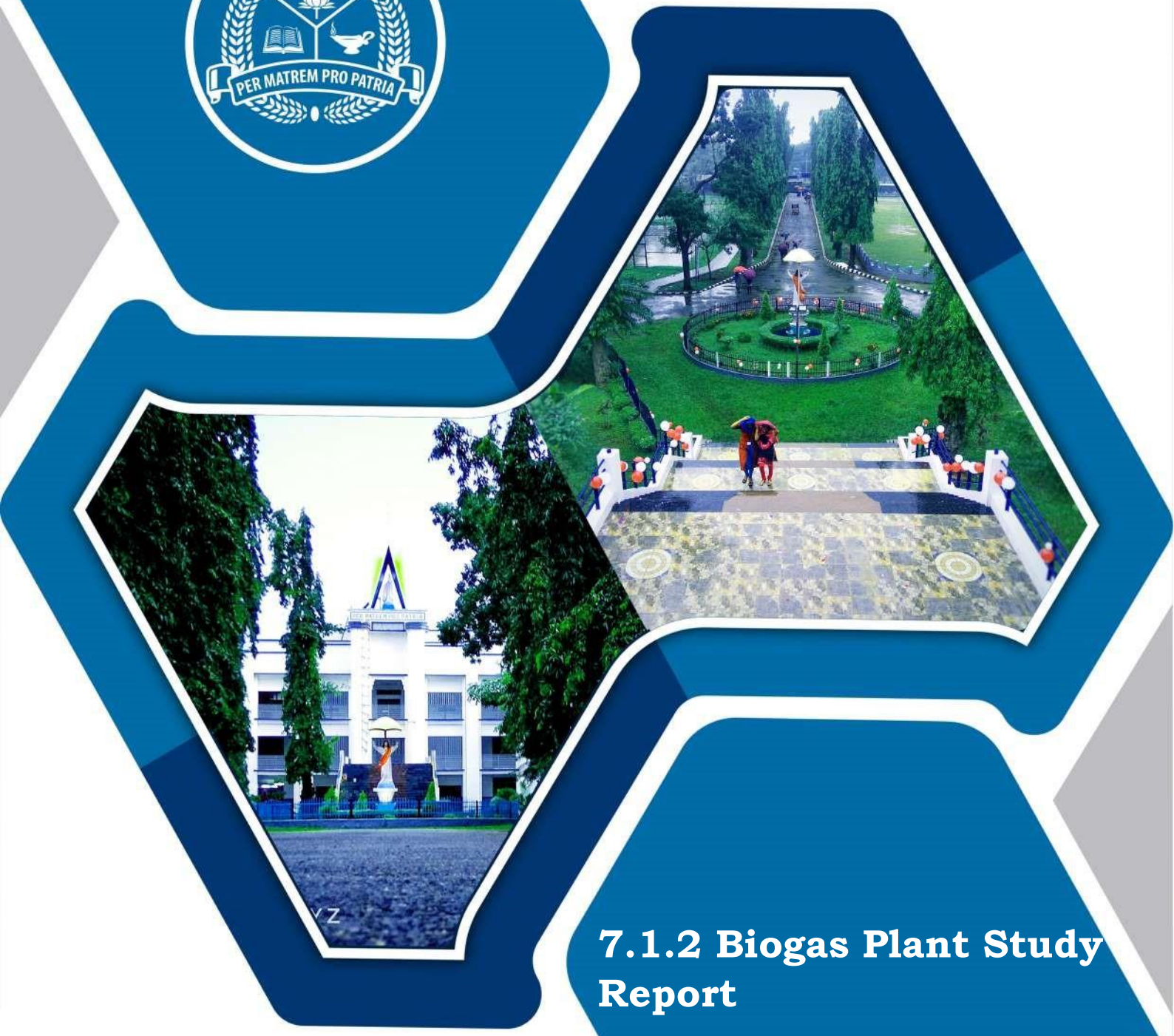
FATIMA MATA NATIONAL COLLEGE

AUTONOMOUS

(Reaccredited with 'A' Grade by NAAC)

Affiliated to University of Kerala



7.1.2 Biogas Plant Study Report

IQAC INTERNAL QUALITY ASSURANCE CELL

PROJECT REPORT FOR SETTING UP OF A BIOMETHANATION PLANT (BIOGAS PLANT) – FOOD WASTES

Title of the project

Scientific, hygienic disposal of organic wastes, both of plant and animal origin, generation of Biogas and nutrient-rich organic manure and generation of electrical energy using biogas run IC engine generator.

Technology Dissemination

Jyothi Biogas & Rural Social Service centre, Chemboor, Trivandrum.

Process / Technology

Biomethanation of wastes from plant and animal origin occurs when these wastes are kept in oxygen deprived conditions. The waste treatment plant proper where biomethanation takes place, comprise of the waste digester and the biogas storage space in a single masonry – RCC structure. To hasten the acidifying and methanation process suitable preconditioners are employed.

BIOGAS

Biogas is an effective fuel for cooking and running IC engines. Biogas is a mixture of methane and carbon dioxide. Hydrogen sulphide, Hydrogen and other gases in very small quantities may also be present in Biogas. It is the methane gas which makes Biogas a valuable fuel. The more the methane content, the more useful and effective will be Biogas.

Comparison between Biogas and LPG

A 500 Kg per day capacity Biogas plant produces approximately 40 m3 (40,000 ltr) of Biogas per day when feed with 500 kg waste. Out of this 8000 ltr Biogas will be stored in the gas storage space of the plant. If needed additional biogas storage facility may be constructed.

40 m3 Biogas is equal to 17.33 kg of LPG (Butane)

JYOTHI BIO GAS & RURAL SOCIAL SERVICE CENTRE
REG.NO T-1050/
CHEMBOOR
OS MANGALAM, TRIVANDRUM-695

MNES APPROVED FIXED DOME BIOGAS PLANT BASED ON NIGHT SOIL - ALL BIODEGRADABLE WASTE 100 Kg

Gas holding capacity at one time - 40% daily gas production
HRT -40 days