Developing of ANN model for prediction of performance and emission characteristics of VCR engine with orange oil biodiesel blends

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functions were investigated. Levenberg–Marquardt (trainlm) with log and tan sigmoidal transfer function provided the best results amongst the other six training algorithms. It was found to be an accurate predicting model for analyzing the performance and emission characteristics VCR engine with biodiesel blends. In all compression ratios, 20 OME showed better thermal efficiency and reduced fuel consumption than diesel. Lower CO and HC emissions were observed with 20 OME than diesel except NOx.

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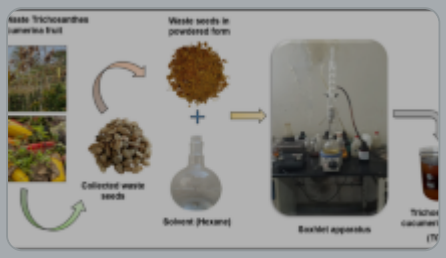

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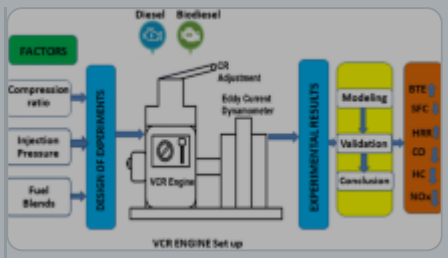

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OME:

20 OME: 20% orange oil methyl ester + 80% neat diesel

CR: Compression ratio

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