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(57) Abstract :

Title: A PORTABLE HOUSEHOLD MICRO BIO-DIESEL REACTOR ABSTRACT A portable household micro bio-diesel reactor 100 comprising: a reactant mixture circulation unit 102 where a primary reactant such as oil, methanol and catalyst mixture from a reactant storage unit are passed through one end of the unit and allowed to mix evenly in a mixing reaction chamber maintained at a temperature of 60-70°C; a methanol vapor condensation unit 104 where a recovery cycle of a methanol is initiated once a separation layer is observed between a biodiesel and a glycerol; and a biodiesel washing unit 106 where a separate circulation loop is provided in the reactor for hot water from the constant temperature bath in a batch processing to wash the biodiesel to remove the remaining glycerin, wherein the portable household micro bio-diesel reactor 100 is made of individual reactor units which handle the reaction mixing and vapor transport to produce a higher yield of biodiesel. FIG. 1

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