

Anaerobic Treatment of Waste Water from Vegetable Oil Refineries

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A new tower type biogas reactor will be presented which especially is suitable for the treatment of fat and oil containing waste water.

By-products resulting from the refining process of edible oils can be used to produce energy-rich biogas. On the example of washing water coming from the centrifuge (chemical oxygen demand COD = 12.100 mg/l) and phospholipids from the degumming process (COD = 1.250.000 mg/l) experiments were performed. A mixture of washing water (12 parts) and phospholipids (1 part) was treated in an experimental reactor. The COD-content of the mixture can be converted to biogas almost totally (98 %). The resulting biogas contains 67 % methane and 33 % CO₂.

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