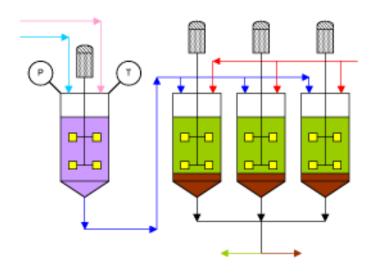


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BIODIESEL PRODUCTION UNIT



We manufacture lab-scale benchtop biodiesel manufacturing units.

Biodiesel is an eco-friendly, alternative diesel fuel prepared from renewable resources such as vegetable oils & animal fats. These natural oils & fats are made up of triglycerides, which, when reacted chemically with lower alcohols in the presence of a catalyst, result in fatty acid esters. These esters show a striking similarity to petroleum derived diesel & are called biodiesel.

Edible oils such as soyabean & sunflower oils, as well as non-edible oils such as jatropha, karanjia & rice-bran oil can be used to produce biodiesel.

Advantages of biodiesel over conventional petroleum diesel are as follows:-

- 1. Higher cetane rating, hence less knocking
- 2. Better lubricity
- 3. Environmental benefits due to cleaner burning
- 4. Made from renewable sources; can be prepared locally
- 5. Non-edible oil plants grow on wasteland (arid & semi-arid region) & require almost no post-plantation management & care
- 6. More economical than petroleum diesel

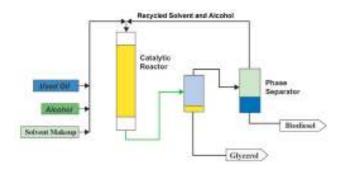
The lab-scale biodiesel production unit consists of equipments for the following steps:

- 1. Conversion of vegetable oil to biodiesel
- 2. Separation & washing of biodiesel produced

They are used in colleges/institutes for demonstration to students & for practicals in fermentation technology. They find application in research laboratories for the purpose of process development & scale-up.

Salient features of our product are as follows:-

- 1. Adequate safety features incorporated
- 2. Dry washing & filtration system, which significantly reduces overall biodiesel production time & cost
- 3. Low saponification of oil
- 4. Suitable for continuous, heterogeneous catalytic reaction, using solid catalyst
- 5. Available in 3 sizes 5, 10 & 15 litres
- 6. Suitable for batch & continuous modes
- 7. User friendly; easy to operate, clean, & store
- 8. Design suitable for facilitating scale-up to commercial levels



Manufactured in India by:-

NAVIN PROCESS SYSTEMS

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