

# Basic Knowledge Biodiesel

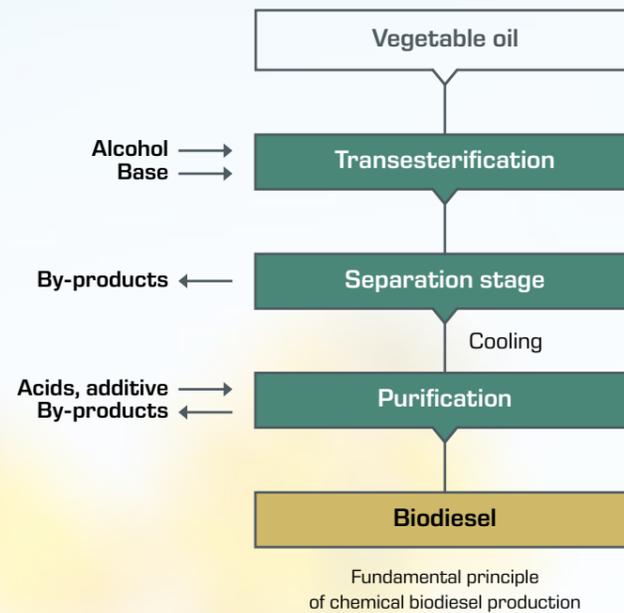


Biodiesel is an important element in the biofuels field. Biodiesel can be produced from a wide variety of raw materials, which mainly vary by region.

It is mainly vegetable oils which are used, and these are chemically or biologically converted into biodiesel. In temperate regions, rapeseed oil is used in many cases. In sub-tropical regions on the other hand, palm oil is often used.

Furthermore, various input materials such as short-chain alcohols and bases are required for the chemical process of transesterification.

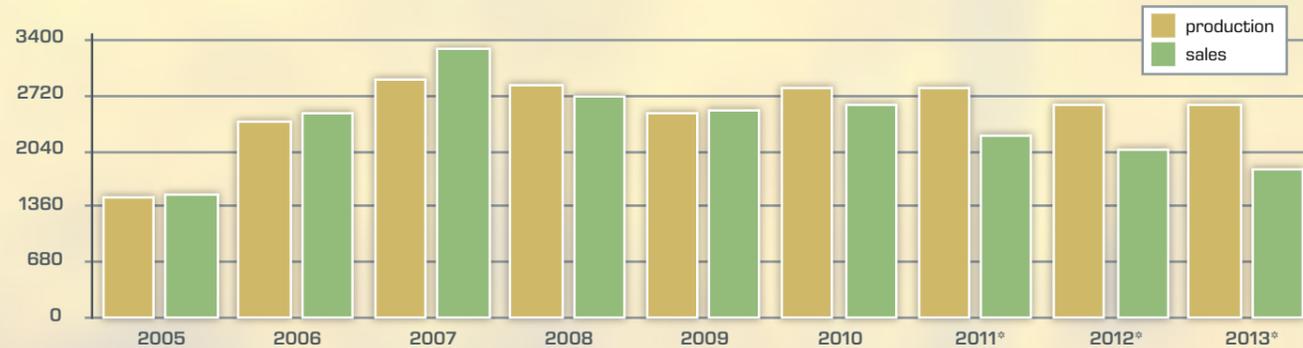
After biodiesel has been successfully produced, it is necessary to clean the biodiesel for use in engines. It is mainly water which is separated out in the additional step. The main by-product is glycerin. A variety of processes are currently being developed to use this glycerin. Thanks to the high level of biodiesel production, large quantities of glycerin which exceed the demand from conventional use as antifreeze and a base for ointments are available.



## Growth of biodiesel

The growth of biodiesel production and biodiesel sales in Germany is linked to political targets. The proportion of biodiesel has been steadily rising for a few years due to the tax benefits and admixtures, and in 2007 reached its peak of 12% of the

German diesel fuel market. Production and sales fell in subsequent years due to the declining price advantage and rising raw material costs.



Growth of biodiesel in Germany (in 1000t)

\*Sales excluding hydrogenated vegetable oils

Source: Ufop, VDB, BAFA, BMF, FNR (April 2014) © FNR 2014

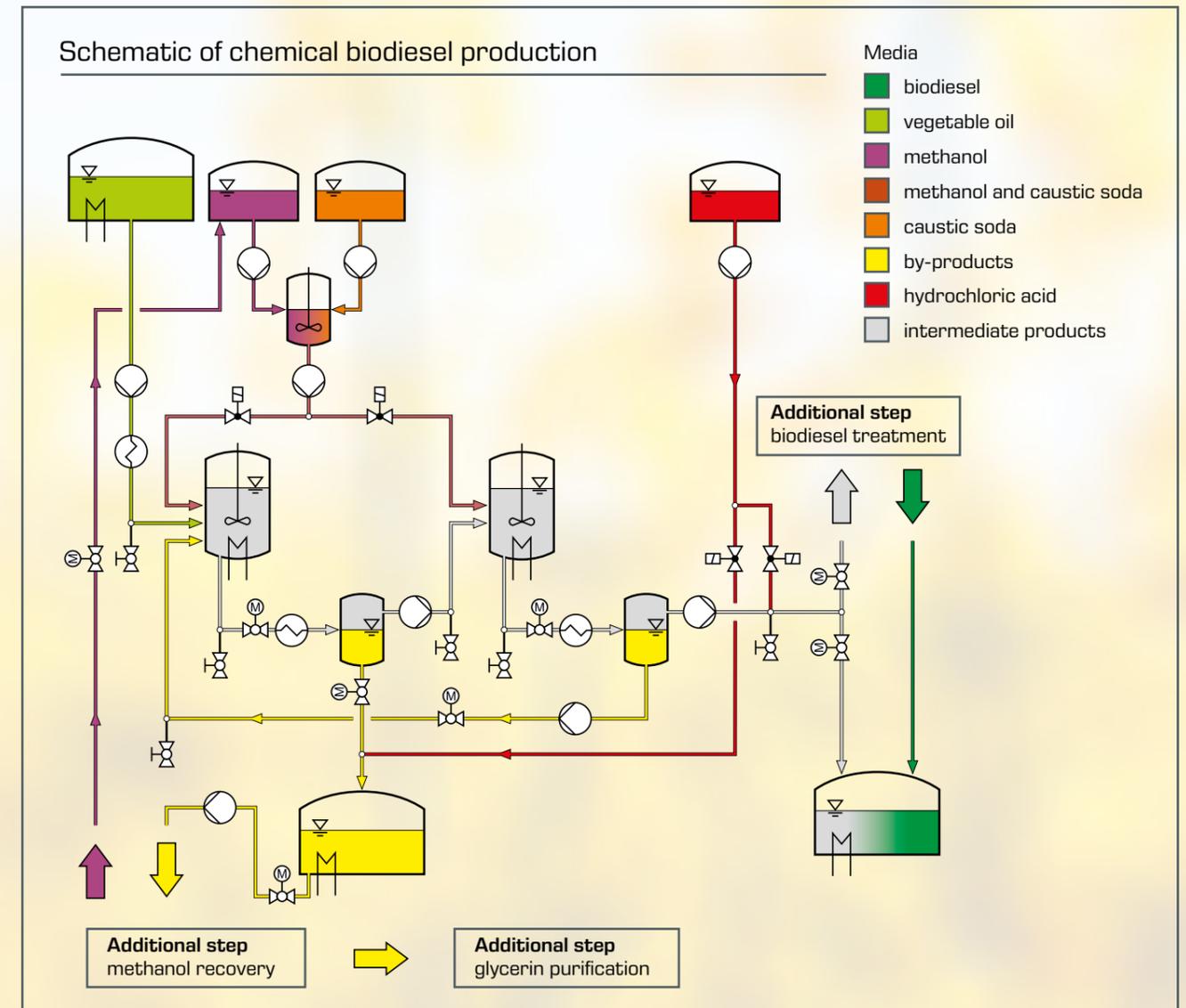
## CE 650 Biodiesel Plant

### Biofuels for carbon neutral energy

In addition to the biotechnical production of ethanol (CE 640), an experimental plant for biodiesel production from vegetable oils is being developed. Biodiesel is produced with a chemical reaction, namely transesterification. With the added alcohol, e.g. methanol, the vegetable oil feedstock is separated into biodiesel

and the by-product glycerin. CE 650 offers you the traditional chemical production method for biodiesel and unwanted by-products can be removed by the optional treatment.

### Schematic of chemical biodiesel production



Product No.  
083.65000

More details and technical data:  
[gunt.de/static/s5449\\_1.php](http://gunt.de/static/s5449_1.php)

