Oleochemicals

Glycerin Recovery Processing Plant

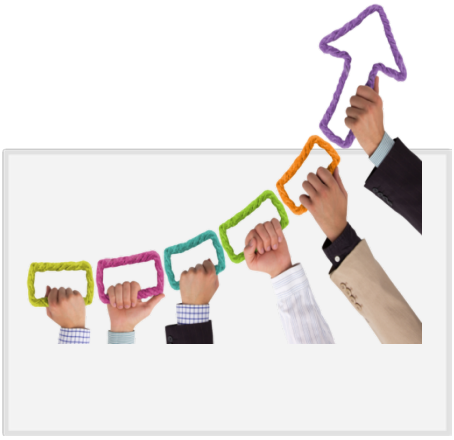
IPS Engineering

BASIC INFORMATION

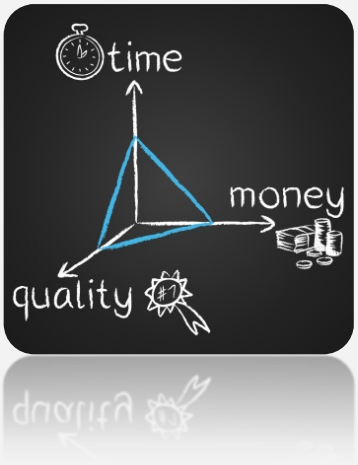
General

Excellent experience gained over the last years on Edible oil refining and oleochemical plants further reinforces our commitment to offer innovative and eco sustainable solutions for both edible and inedible oil processing plants.
Our ability to design in this field is represented in the following pages which show our concepts of single unit or multi purpose unit.

Our specific solutions for specific projects are the activities that are carried out in close collaboration with the customer in order to identify the best applicable technology and optimize investment profitability. This is our best and innovative proposal to our partner.
We are actively investing in upgrading and expanding our knowledge, while enhancing our design capabilities.

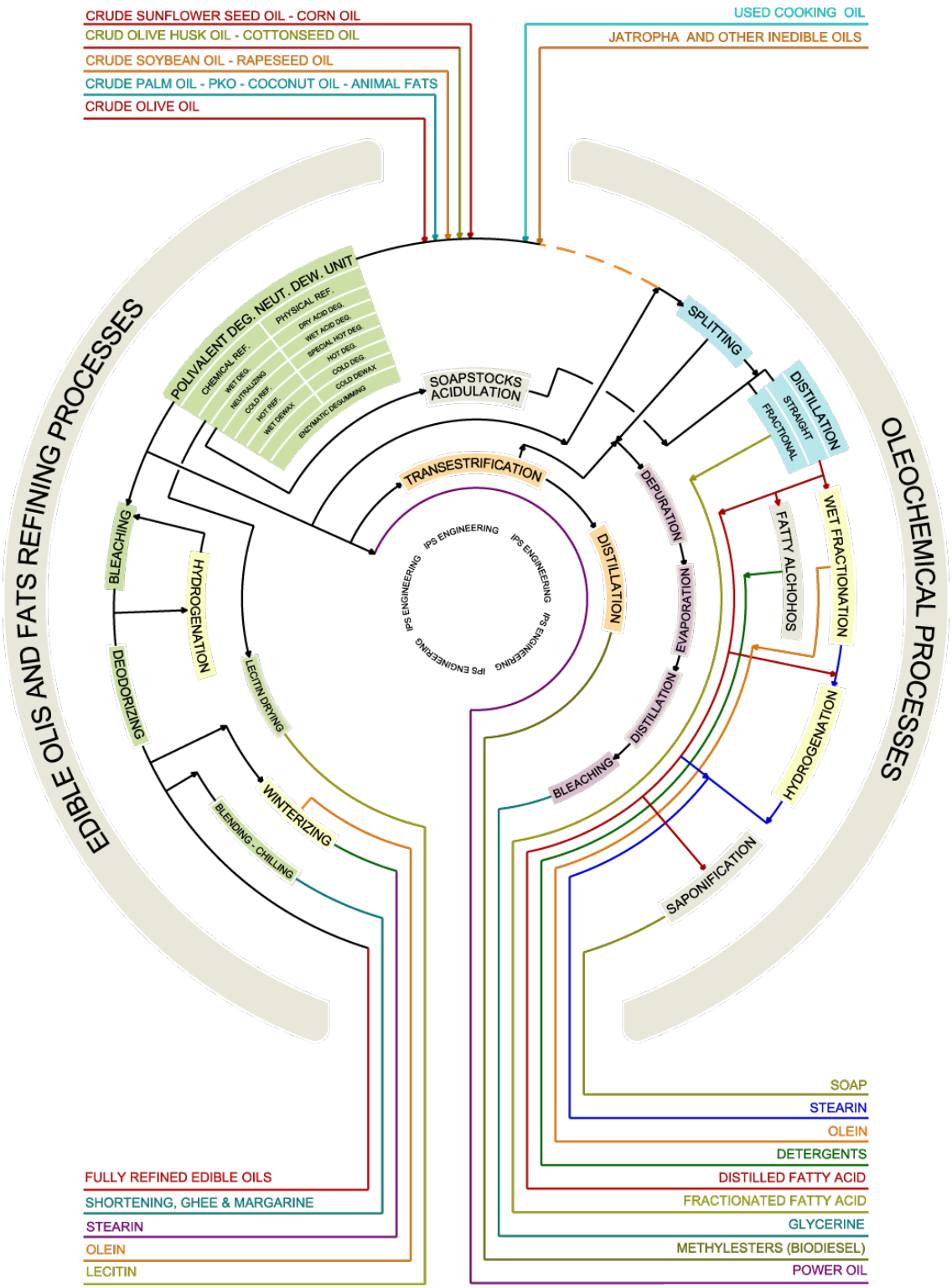


We can develop your idea.



We assist customers in the project development and realization process – from the preliminary research, feasibility study, conceptual design, technology selection, assignment of tasks specification to the detailed engineering design, procurement, construction, commissioning & start-up, maintenance & optimization and personnel training.
This unique focus allow us to develop services to trigger process improvement, providing a range of " Services to Compete". In this manner, with market conditions ever changing, we offering the engineering services at an extremely affordable price.

Oil & Fat Processing



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Glycerin Recovery

Glycerol is obtained as a main byproduct in some oleochemical processes such as splitting, saponification and Transesterification. This type of glycerol is known as natural or native glycerol. Because of its particular combination of chemical and physical properties and because it is physiologically innocuous, glycerol is used in a large variety of applications.

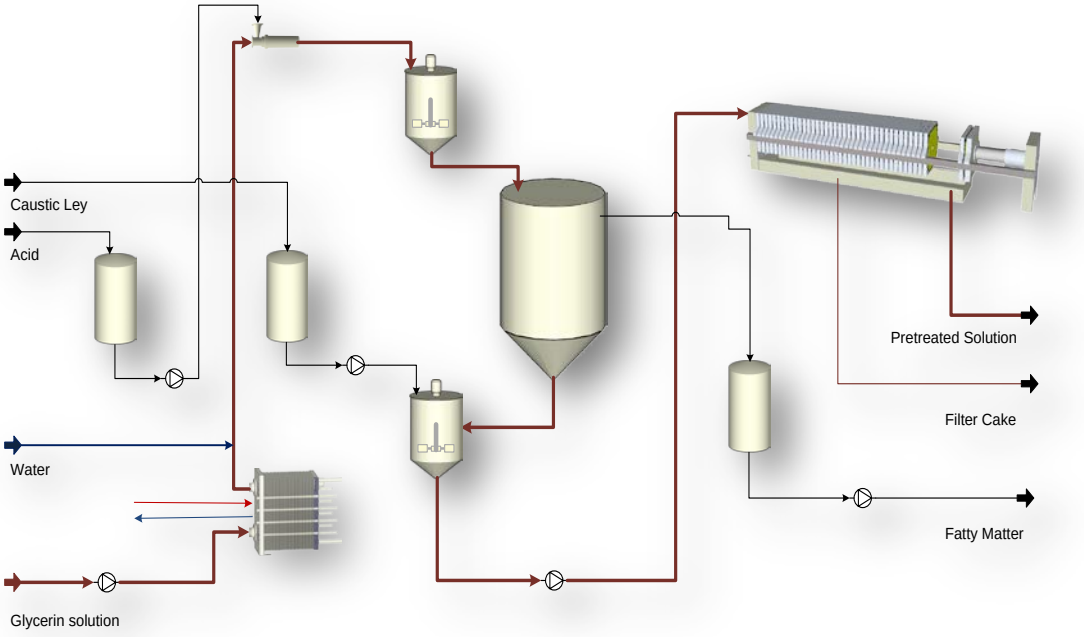
Crude & distillated glycerin

The following processes are involved in glycerin recovery from feedstock solution with different compositions:

- Pretreatment
- Concentration
- Refining

Pretreatment

The pretreatment of glycerin solution is crucial for trouble-free production and for the quality of the final product. Dispersed fat, fatty acid, MONG, salt and other components can be largely removed in this unit by settling, centrifugation and other separation techniques.



Glycerin pretreatment unit block diagram

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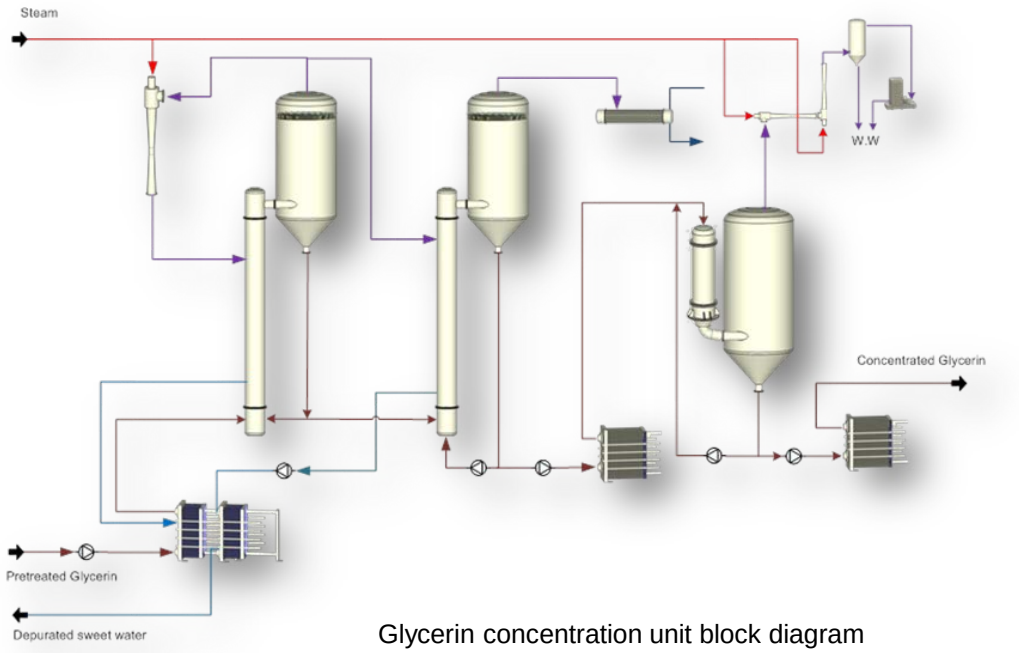
Glycerin Recovery

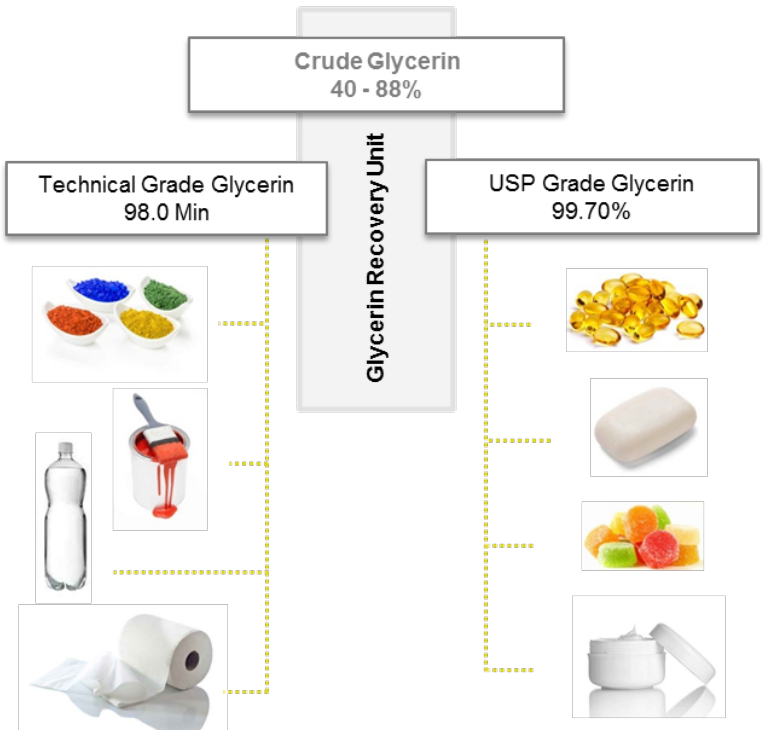
Concentration

In a subsequent step the concentration is immediately increased to 70 – 90 % glycerol to render the crude product stable to storage.



Glycerin concentration unit block diagram

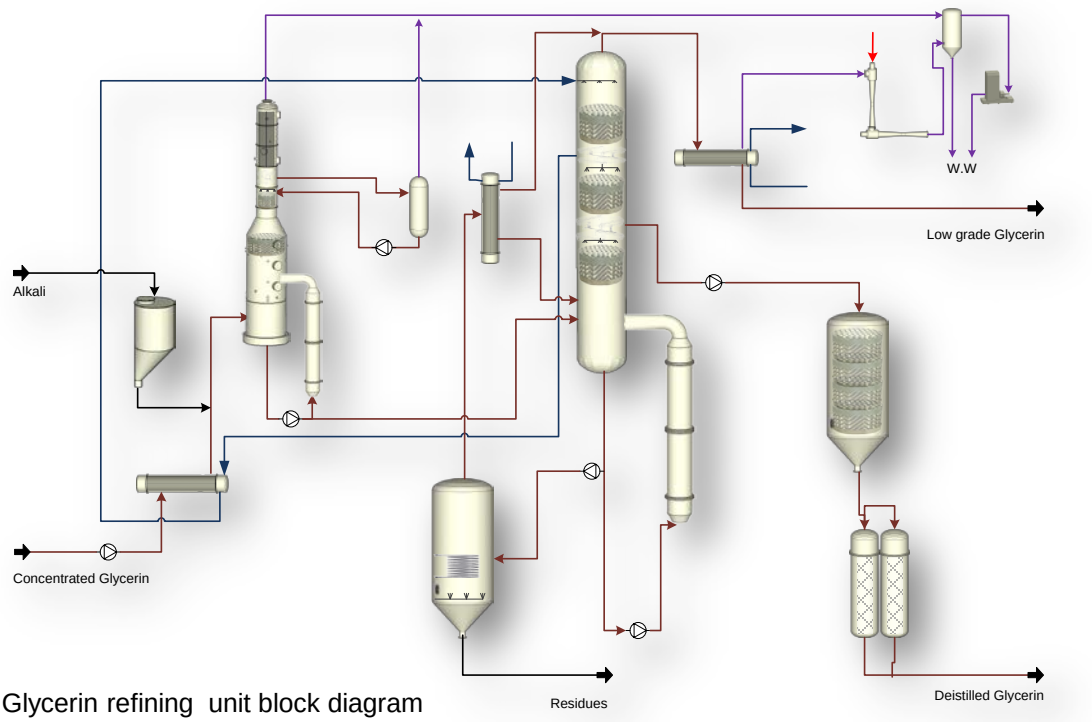
The non ionic components such as pigments can be removed physically by adsorption resins or activated carbon in filtration.



Glycerin Recovery

Refining

The purpose of glycerol refining unit is to obtain high purity bleached glycerol from crude pretreated and evaporated glycerol. The pure glycerin will be produced in distillation unit under high vacuum at c.a 160 °C . For workup of glycerol with a high salt content, ion exclusion chromatography or thin-film distillation is employed.



Glycerin refining unit block diagram

Capability & Performance

Depending on the origin of glycerol and its quality and on the basis of cost benefit parameter drawn from the feasibility study, appropriate processes can be proposed.

We can supply continuous or semicontinuous plants in a wide range of capacities, from 5 to 50 t/d to obtain glycerol with a requested specification or in complying with the international standard.

Concerning yield, the pure glycerol losses can be up to 3 % for distilled glycerol from sweet water and 6% when feedstock come from soap lyes and biodiesel plant.

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