



The Future is Right Here





Excellence in Oils & Fats Pioneer in Biodiesel Technologies

Corporate Profile

Vision:

The LIPOCHEM Group aspires to be an excellent world class corporation in its core business of process technologies for palm oil refining, biodiesel, fats & oils and related products.

Mission:

We are committed to:-

- Exceeding our clients' expectations through innovative and high quality engineering products and services.
- Placing strong emphasis on a learning work environment to stimulate staff development and moulding high caliber professionals as a team.
- Continuously enhancing the Group Value and financial stability and our ability to deliver on our commitment at all times.
- Embedding quality and continuous improvement in all our business processes to best serve our clients.

LIPOCHER

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LIPOCHEM Introduces the Latest Oils and Fats Technologies

Our core principles

LIPOCHEM Group is a reputable force in the Oils and Fats processing and engineering industry. As a dynamic technology provider with in-depth knowledge and extensive experience, we bring in the most advanced technology for the Oils and Fats industry. We are committed to continually innovating and developing our expertise to match global standards.

We specialise in

- Process design and engineering
- Detailed engineering and equipment fabrication
- Project management
- Process and engineering consultation
- Research and development





Expertise Counts



Why choose us? **Because expertise counts.**

LIPOCHEM understands that each client's demands and requirements are unique. We strive to facilitate our clients' businesses by developing products that meet ever changing industry trends.

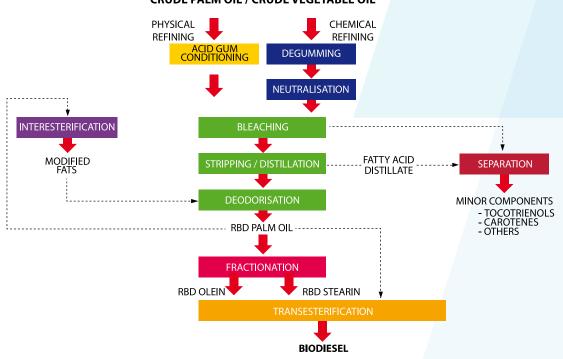
To maintain loyal customers, our concept of value includes a strong team of professionals to provide expert guidance towards the best solution and the most economical plant. Our after-sales service ensures that continuous support and guidance is provided even after the initiation of the process plant.

Our highly skilled service team is always standing by to share their know-how with you. We ensure that our competence is maintained at the highest level by constantly upgrading our skill through practical and advance training. In addition, we aim to deliver quality services that exceed our clients' expectations as well as place them firmly ahead of their competitors.





Various Refining & Processing Routes for Oils & Fats



CRUDE PALM OIL / CRUDE VEGETABLE OIL





Biodiesel Process

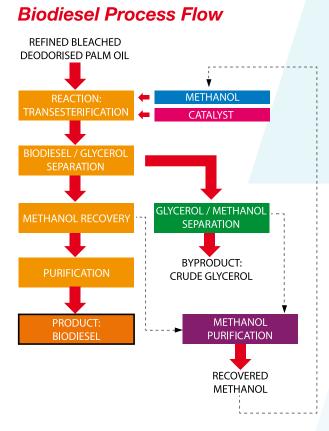


The perfect solution

As the world is confronted by the issue of depleting energy resources, LIPOCHEM, in partnership with Malaysian Palm Oil Board, offers an alternative renewable source of energy. As one of the hottest breakthrough technologies to emerge in recent years, Palm Biodiesel is a form of bio-fuel derived from palm oil. With an improved efficiency based on a proven technology spanning more than 20 years, the Biodiesel plant is designed for low material consumption with high yields which meets international standards, such as EN 14214.

The plant is designed with enhanced features of low pressure and low temperature for better energy efficiency and safety. With low capital investment and operational cost, this plant guarantees a high return on investment especially with the overwhelming demand for Biodiesel in the global market. Furthermore, this process is the only plant optimised for palm products as feedstocks.





We have now successfully delivered and commissioned Biodiesel plants based on PFAD as feedstocks. With this new development, LIPOCHEM can now offer Multi-feedstocks Biodiesel Technology.





Physical Refining Process



Bleaching and Deodorisation Process

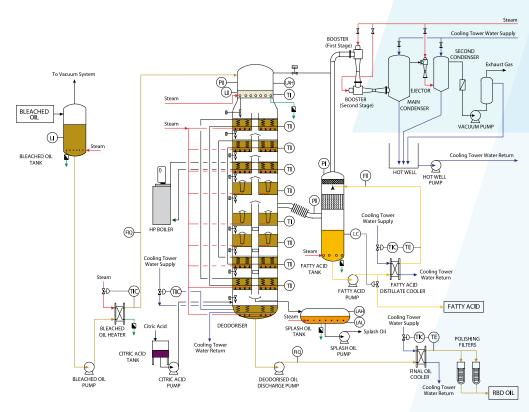
A distinct feature of LIPOCHEM's bleaching system is the use of steam agitation in the "zig-zag" bleacher. Specially designed steam spargers over a series of sloped trays ensure thorough mixing and prevent earth deposition and stagnant pockets thus reducing the difficulty of maintenance.

LIPOCHEM improves the technology of heating under vacuum by specially designing a final heater in the continuous deodorisation process. As we focus on energy conservation and product quality, we have incorporated efficient features such as double stage heat recovery of up to 80% and low consumption of sparging steam with efficient packed column. Optional use of the mammoth pump system will reduce extensive splash oil compared to conventional deodorisers.

LIPOCHEM's semi continuous deodorisation process offers the flexibility of multistock change. We have also enhanced the technology of heat recovery under vacuum by incorporating double thermal siphon and cooling under vacuum where antioxidant dosing that is done under vacuum improves the stability of the product.







Semi Continuous Deodorisation Process





Dry Fractionation Process



Dry Fractionation Process

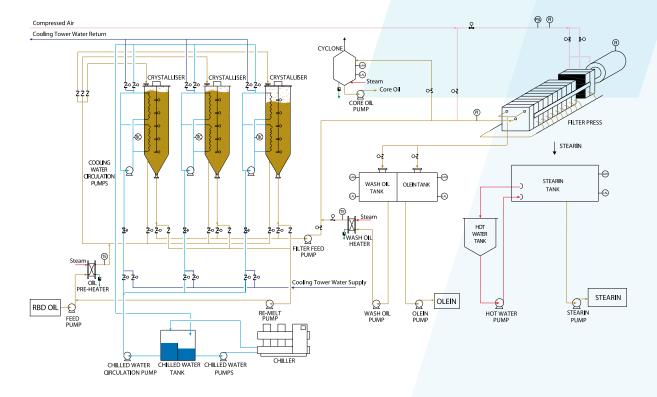
Multi products of various melting points and features demand a fractionation process that will be able to handle sharp cuts for liquid and solid fraction with crystallisation and filtration under low temperatures. LIPOCHEM not only offers the conventional fractionation process but is also able to customise the plant according to customers' requirements.





We are also optimising technologies in solvent fractionation for the production of high value products such as tocotrienols, carotenes and other antioxidants by collaborating extensively with international companies supplying membrane filters and solvent recovery systems.

An example is the fruitful partnership in R & D with the renowned MPOB in the successful scale up to a commercial plant producing very unique palm based oil called NoveLin with excellent Cold Stability and Health Benefits.



Dry Fractionation Process





Global Partnerships



New Technology, New Vision.

LIPOCHEM has been enhancing its position as a leader in the process and engineering industry. With a team of very competent and high performing professionals, we have developed a comprehensive range of process solutions in Lipid technologies. To accomplish our vision, we choose to extend our team by establishing partnerships globally.

Our Established Partners

VTA, GERMANY – Wiped Film and Short Path Distillation for high mass and heat transfer requirements with short residence time for products of high sensitivity to thermal stress operating under low pressures.

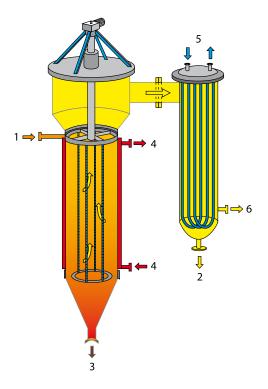
YABUTA, JAPAN – Special Membrane Filter Separation Processes that enable filtration under low temperature for the area of novel lipid separations.

MPOB, MALAYSIAN PALM OIL BOARD – Technical collaboration in Biodiesel Technology and various other research and development works in lipid technologies.



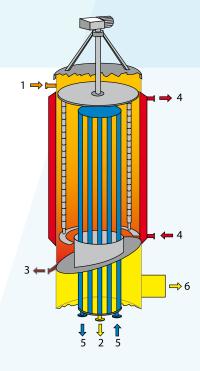


VTA Wiped Film Evaporator



- 1. Feed
- 2. Distillate
- 3. Residue
- 4. Heating Media
- 5. Cooling Media
- 6. Vaccum

VTA Short Path Evaporator







Always Looking Forward



One Step Ahead

As a leading example of the Oils and Fats industry, LIPOCHEM believes in looking forward to the future by expanding our concepts and horizons, and combining them with our proven solutions through joint collaborations with our established and new partners as well as our customers. We are determined to achieve our goals by improving and further developing the current Oils and Fats technologies.

We can tailor-make other plants and processes

- Interesterification
- Esterification
- Neutralisation
- HydroFlex Hydrogenation Plant
- Filtration
- NoveLin Plant
- Multi-feedstocks Biodiesel Plant



For more information, please do not hesitate to contact us.

We welcome the opportunity to discuss how LIPOCHEM can add values to your products and business.

You can always count on us for the best solution to your needs, keeping you One Step Ahead in your business.



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