wherein the initial fatty acid oil mixture comprises at least from about 10% to about 30% by weight of omega-3 fatty acids

and/or

wherein the initial fatty acid oil mixture comprises vegetable oil, preferably vegetable oil chosen from palm oil, soybean oil, rapeseed oil, sunflower oil, peanut oil, cottonseed oil, palm kernel oil, coconut oil, olive oil, corn oil, grape seed oil, hazelnut oil, linseed oil, rice bran oil, safflower oil, sesame oil, almond oil, pecan oil, pistachio oil, walnut oil, castor oil, jojoba oil, shea oil, annatto oil, oil derived from marine sources, preferably sources chosen from fish oil, marine invertebrate oil, marine algae oil, oil derived from algae or microbes and/or animal fat or oil, preferably milk fat or oil.

10. The process according to any one of claims 1 to 9,

wherein the at least one impurity is chosen from, free cholesterol, esterified cholesterol, sterols, esterified sterols, phenolic compounds, free fatty acids, monoglycerides, oxidation products, components that create unwanted smell and/or taste in the fatty acid oil mixture, vitamin A, vitamin D, astaxanthin, canthaxanthin, and other carotenoids

and/or

wherein the at least one impurity is an environmental pollutant, especiallypolychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), agrochemicals, chlorinated pesticides, polycyclic aromatic hydrocarbons (PAHs), hexachlorocyclohexanes (HCH), dichlorodiphenyltrichloroethane (DDT), dioxins, furans, and nonortho-PCBs.

11. The process according to any one of claims 1 to 10,
wherein the organic solvent comprises aliphatic hydrocarbons, aromatic hydrocarbons, ketones, esters, alcohols, liquefied gases, and supercritical gases and mixtures thereof, preferably the organic solvent is selected from primary alcohols, such as methanol or ethanol, or iso-propanol, and solvent mixtures containing said alcohols where the non-alcohol solvent(s) may include a further organic solvent, a liquefied gas or a

supercritical gas, in particular propane and carbon dioxide, or water.

12. The process according to any one of claims 1 to 11,
wherein the at least one selective membrane comprises a material chosen from polyethylene, polypropylene, polytetrafluoroethylene (PTFE), polyvinylidene difluoride (PVDF), polysulfone, polyethersulfone, polyacrylonitrile, polyamide, polyimide, polyamideimide, polyetherimide, cellulose acetate, polyaniline, polypyrrole, polyetheretherketone (PEEK), polybenzimidazole, and mixtures thereof.

13. The process according to claim 12