WHAT IS CLAIMED:

1. A method of making a biomass of a microorganism having fatty acids and a concentration of EPA, comprising:

(a) fermenting the microorganism in a fermentor vessel to produce a fermentation broth having an aqueous phase and biomass wherein the aqueous phase has a dissolved gas wherein the microorganism comprises a Thraustochytrid that produces a biomass having at least 3% EPA of the total weight of the fatty acids; and

(b) adjusting the dissolved CO_2 to >2% of the dissolved gas.

2. The method as recited in Claim 1, further comprising adjusting the pressure on the biomass to attain a desired EPA level in the biomass.

3. The method as claimed in Claim 1 or 2, further comprising adjusting the temperature in the broth to attain a desired EPA level in the biomass.

4 The method according to any one of claims 1 to 3, wherein the amount of the biomass, EPA or DHA is measured prior to adjusting the dissolved CO_2.

5 A method of producing an oil, the method comprising making a biomass according to any one of claims 1-4, and obtaining the oil from the biomass.

6 The method of claim 5, wherein the oil is extracted from the biomass.

7. The method of Claim 6, wherein the biomass is produced from an isolated microorganism deposited under ATCC Accession No. PTA-10208 wherein the oil comprises comprising fatty acids wherein the fatty acids further comprise omega-3 polyunsaturated fatty acids wherein the omega-3 polyunsaturated fatty acids comprise DHA and EPA in an amount of about ≥90%, by weight, of the total amount of omega-3 polyunsaturated fatty acids and the amount of EPA, by weight, is from about 6% up to about 65% of the total amount of EPA and DHA.

8. The method of Claim 7, wherein:
    (a) the amount of EPA, by weight, is from about 6% up to about 28% of the total amount of EPA and DHA;
    (b) the amount of EPA, by weight, is from about 36% up to about 65% of the total amount of the EPA and DHA; or
    (c) the amount of EPA, by weight, is from about 28% to about 36% of the total amount of EPA and DHA.

9. The method of Claim 6, wherein the biomass is produced from an isolated microorganism deposited under ATCC Accession No. PTA-10212 wherein the oil comprises fatty acids wherein the fatty acids further comprise DHA and EPA and the amount of EPA, by weight, is from about 15% up to about 70 % of the total weight of EPA and DHA.

10. The method of Claim 6, wherein the biomass is produced from an isolated microorganism deposited under ATCC Accession No. PTA-9695 wherein the oil comprises fatty acids wherein the fatty acids further comprises omega-3 polyunsaturated fatty acids wherein the omega-3 polyunsaturated fatty acids comprise DHA and EPA in an amount of about 50% to about 70% by weight, of the total amount of omega-3 polyunsaturated fatty acids and the amount of EPA, by weight, is from about 5% up to about 60% of the total amount of the total weight of the EPA and DHA, preferably wherein the DHA and EPA is in an amount of about 60% of the total amount of the omega-3 fatty acids.

11. The method of any one of claims 5 to 10, wherein a crude oil is obtained and wherein the process further comprises purifying the crude oil.