wax ester according to claim 1 or claim 3, wherein, in the first step, a carbon dioxide gas is flown, so that a carbon dioxide source and an oxygen source mixed thereto are provided.

5. The method for producing a euglena highly containing a wax ester according to claim 4, wherein the carbon dioxide gas is those emitted from power plants.

6. The method for producing a euglena highly containing a wax ester according to claim 1, wherein, in the third step, anaerobic treatment is carried out by at least one method selected from inert gas ventilation, standing treatment, and concentration by centrifugation.

~~7. A method for producing a wax ester, comprising carrying out, using the euglena highly containing a wax ester produced through the method for producing a euglena highly containing a wax ester according to any one of claim 1 to claim 6,~~

~~a step of extracting an oily fraction with an organic solvent to obtain an extract, and concentrating the extract to obtain a wax component, and~~

~~a step of separating a wax ester from the wax component with a column to perform a first purification.~~

~~8. The method for producing a wax ester according to claim 7, wherein the concentration is carried out within a range of 50°C ± 10°C.~~

~~9. The method for producing a wax ester according to claim 7, wherein a step of hydrolyzing the wax ester obtained by the step of performing a first purification to perform a second purification is carried out as a next step.~~

~~10. The method for producing a wax ester according to claim 7, wherein, in the step of performing a first purification, hexane or a mixed solvent of hexane and ether to which ether is mixed in an amount of 10% by volume or less is used as an eluting solvent applied to the column.~~