

Online Resources

Online Resource 1 Content of lipids (filled circles), fatty acids (open circles) and amino acids (open triangles) of 38 screened microalgae strains. For reference strain *Chlorella vulgaris* 132 the content of lipids ranged between 18.5 and 23.3% dw, of fatty acids between 3.1 and 4.1% dw and of amino acids between 35.7 and 41.9% dw over the whole test period

Online Resource 2 Effect of light intensity on the number of double bonds per fatty acid molecule (*solid line*) and on the quotient of summarised C16-fatty acids and summarised C18-fatty acids (*dashed line*) in strain *Chlorella sp.* 800

Online Resource 3 Spectrum of fatty acids palmitic (C16:0), palmitoleic (C16:1), stearic (C18:0), oleic (C18:1 ω 9), linoleic (C18:2 ω 6), α -linolenic (C18:3 ω 3) given as relative amounts to 100% in *Chlorella sp.* 800 under different light intensities: 200 $\mu\text{mol photons m}^{-2} \text{s}^{-1}$ (1), 300 $\mu\text{mol photons m}^{-2} \text{s}^{-1}$ (2), 400 $\mu\text{mol photons m}^{-2} \text{s}^{-1}$ (3), 500 $\mu\text{mol photons m}^{-2} \text{s}^{-1}$ (4)

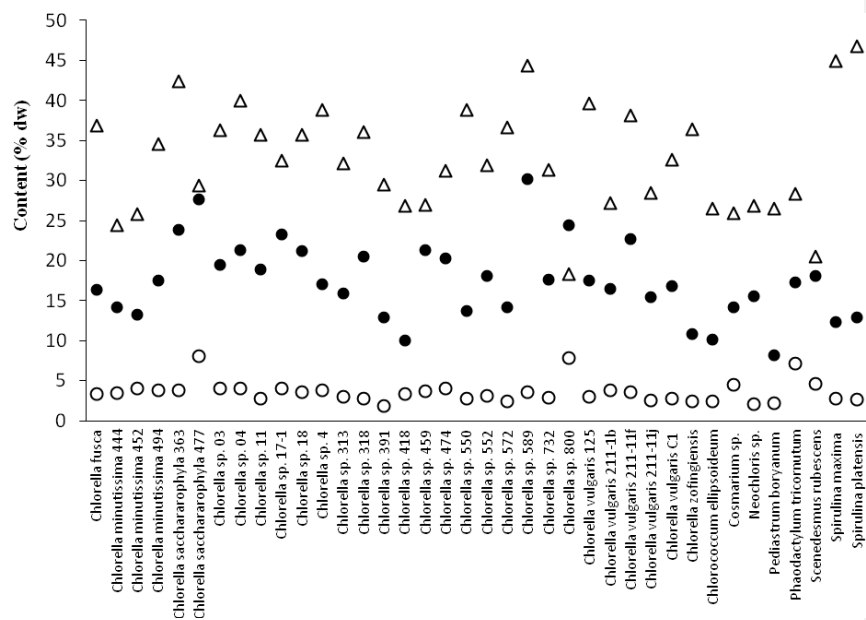
Online Resource 4 Spectrum of amino acids alanine, arginine, aspartic acid, glutamic acid, lysine, leucine given as relative amounts to 100% in five microalgal strains with highest amino acid productivity. *Chlorella vulgaris* 132 (1), *Chlorella sp.* 589 (2), *Chlorella sp.* 313 (3), *Chlorella minutissima* 494 (4), *Chlorella sp.* 11 (5)

Online Resource 5 Correlation of biomass productivity with lipid content (a; $r^2=0.08$), with content of fatty acids (b; $r^2=0.00$) and with content of amino acids (c; $r^2=0.05$) in 39 microalgae strains including the reference strain

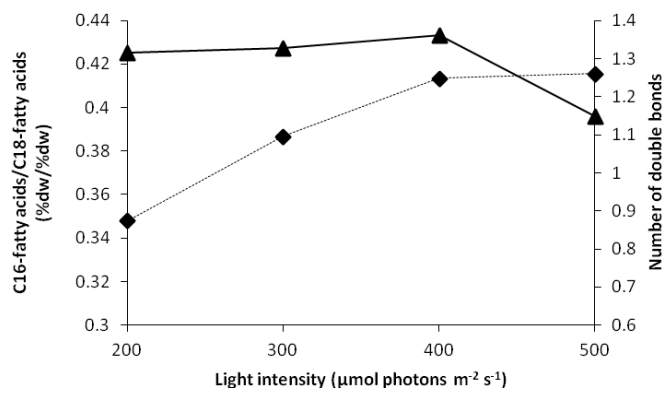
Online Resource 6 Correlation of productivity of lipids with content of lipids (a; $r^2=0.56$), of productivity of fatty acids with content of fatty acids (b; $r^2=0.42$) and of productivity of amino acids with content of amino acids (c; $r^2=0.14$) in 39 microalgae strains including the reference strain

Online Resource 7 Correlation of lipid content with content of fatty acids ($r^2=0.29$) in 39 microalgae strains including the reference strain

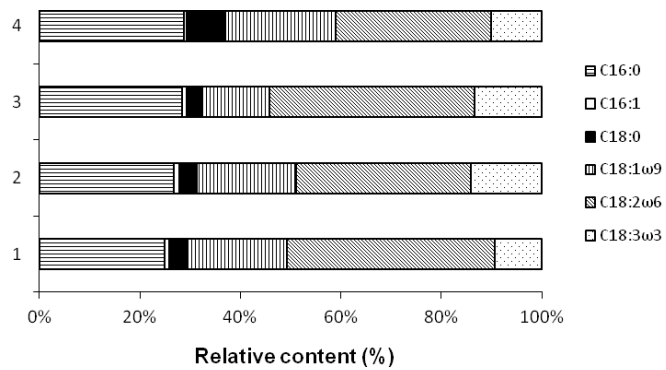
Online Resource 8 Spectrum of amino acids alanine, arginine, aspartic acid, glutamic acid, lysine, leucine given as relative amounts to 100% in *Chlorella sp.* 800 under different cultivation temperatures: 15°C (1), 25°C (2), 35°C (3)



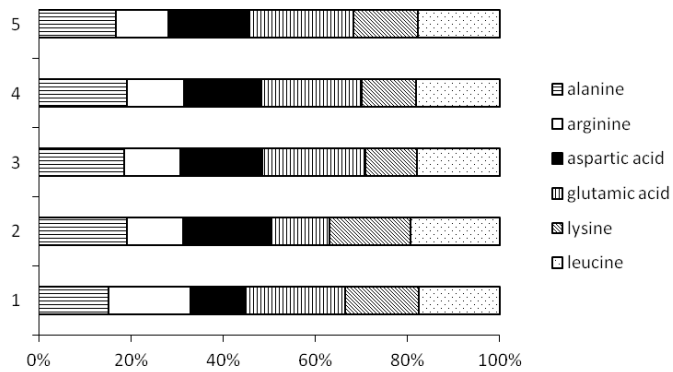
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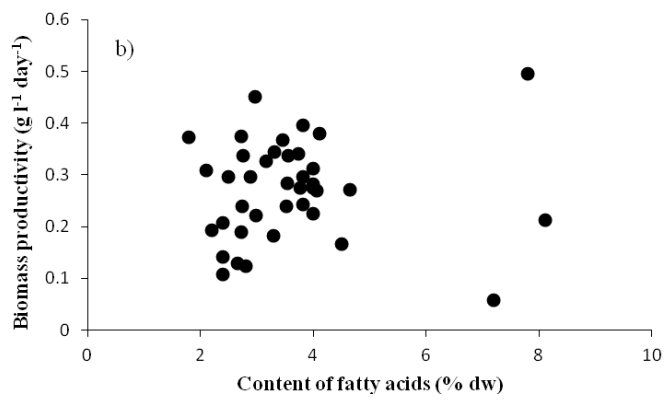
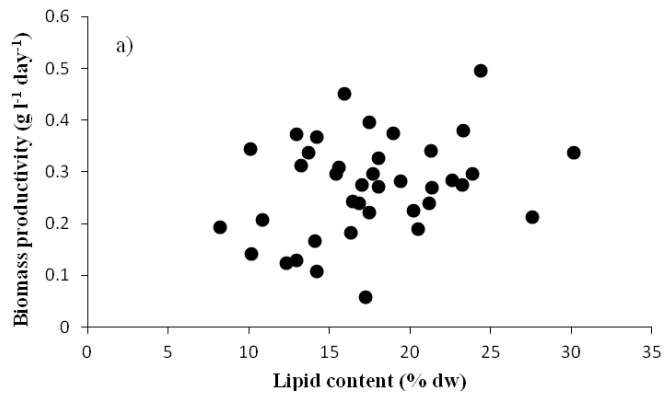
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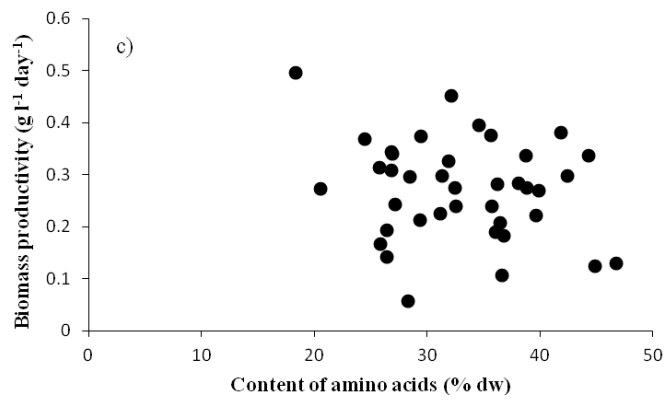


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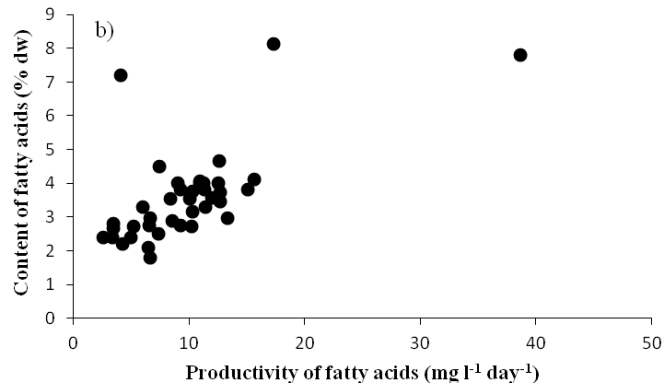
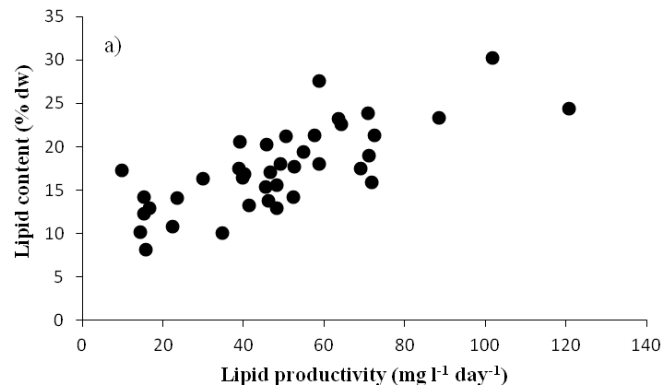


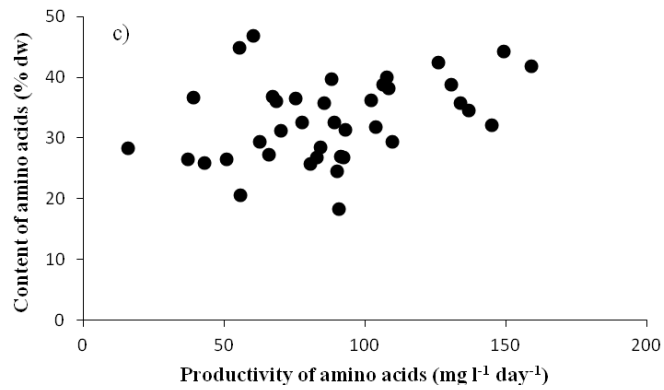
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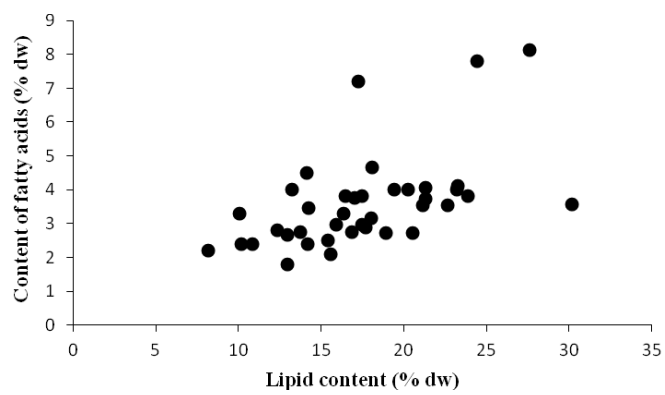


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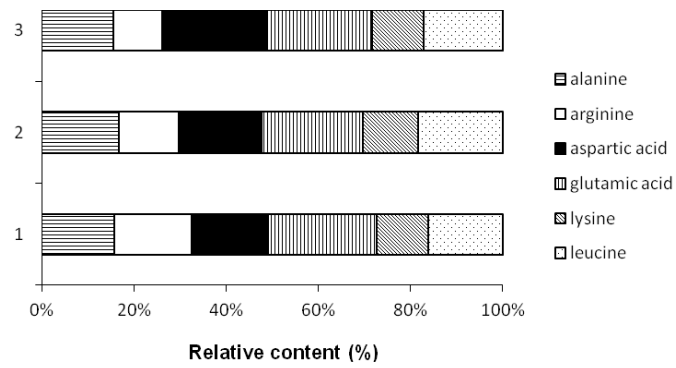




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