

574; 591.544

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 e-mail:menage@inbox.ru

***DUNALIELLA VIRIDIS* TEOD.
 (CHLOROPHYTA)**

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viridis Teod.,
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D. viridis (
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Kornyush, 2002; (, 2002; Vasilic, 1990) , , (, , 2004)

1992, 2000; , 2003; (, 2003; , 2003; , 2003; , 2004; , 2004). (-) , , .

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Dunaliella viridis Teod. (Chlorophyta)

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Dunaliella viridis var. *viridis* f. *euchlora*, IBASU-A N29. -

(1973) (6,5 4 -40)

(26-28 °) -

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D. viridis

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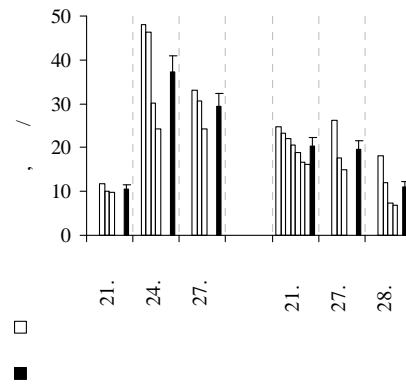
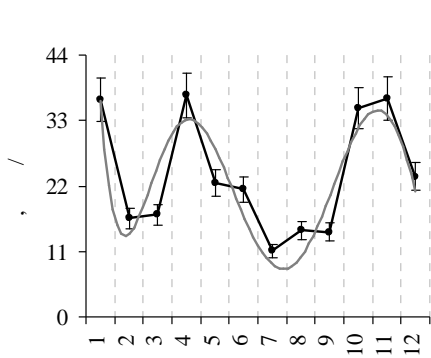
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 2003; Davis, Lowell, 2006),
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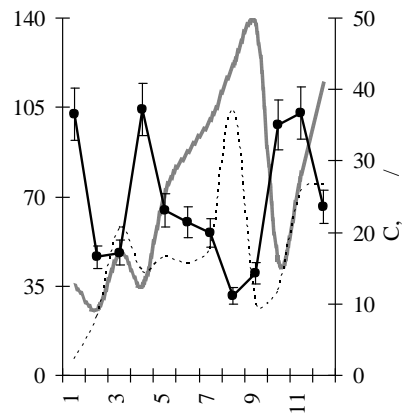
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Dunaliella viridis

S, Hemis, 10^{-6}

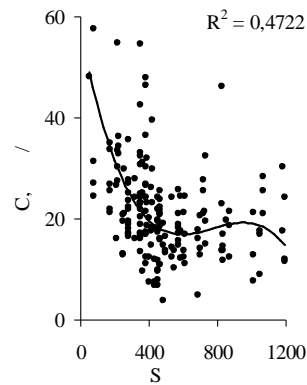
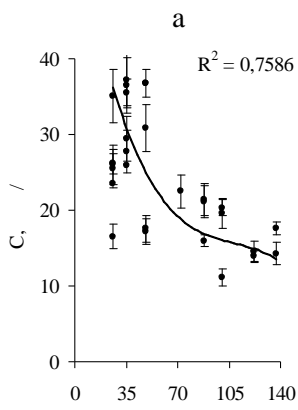


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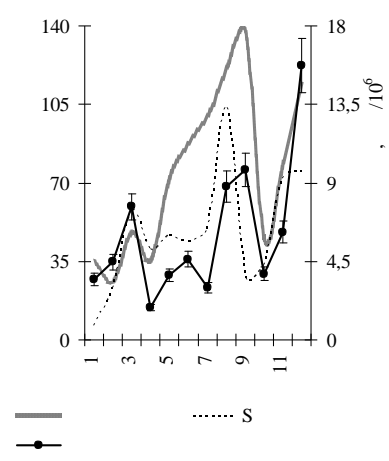
D. viridis

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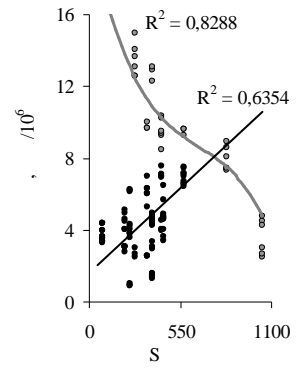
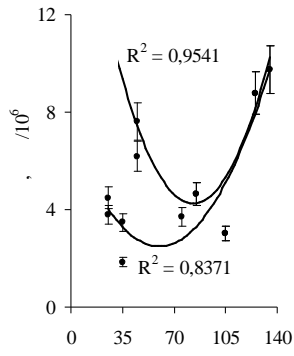
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S, Hemis, 10⁶



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Dunaliella viridis

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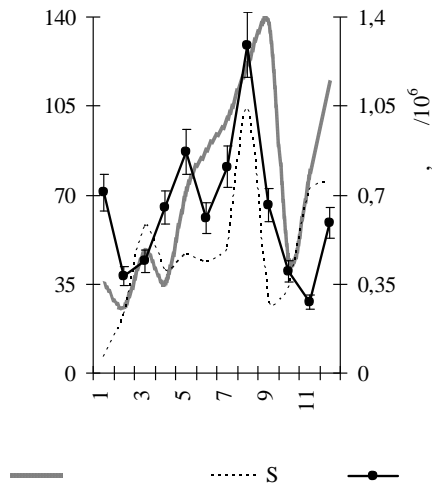
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Dunaliella viridis

S, Hemis, 10^6

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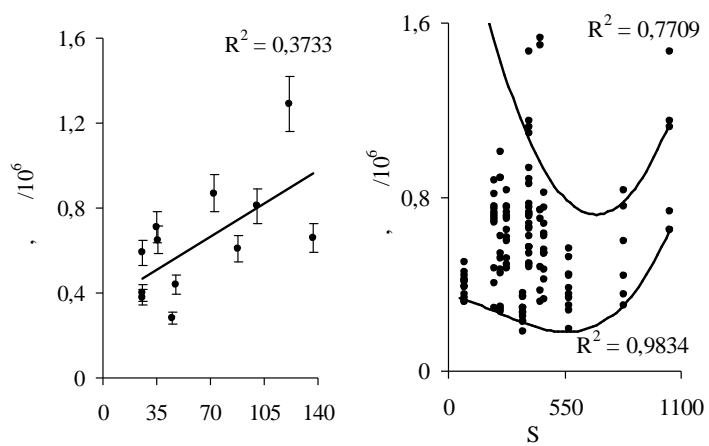
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(Bozhkov, Menzyanova, 1995; , , 1997).



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Dunaliella viridis
S, Hemis, 10^6 ()

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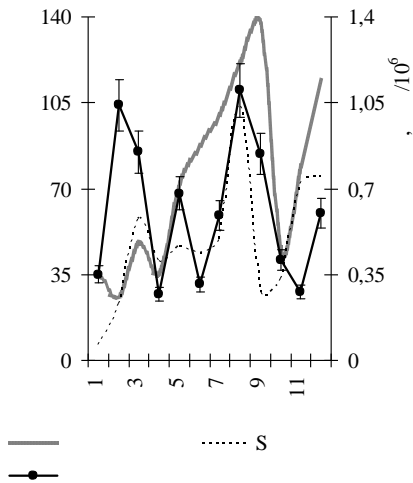
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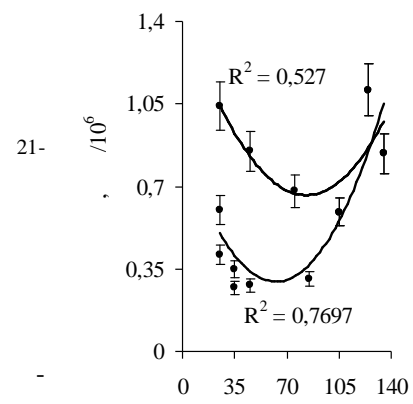
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D. viridis.



8. *Dunaliella viridis*
S, Hemis, 10^{-4}

9. *Dunaliella viridis*



D. viridis

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D. viridis

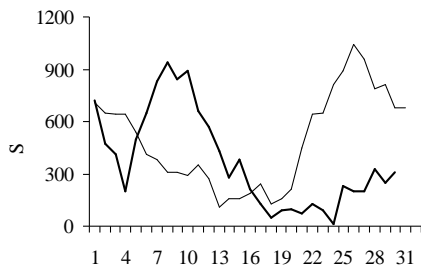
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D. viridis

A.I. Bozhkov, N.G. Menzyanova, M.K. Kovalyova

Biology Research Institute, V.N. Karazin Kharkov National University,
Svobody Sq., 4, 61077 Kharkov, Ukraine

ANNUAL RHYTHM OF THE GROWTH INTENSITY OF CULTURES MICROALGAE
DUNALIELLA VIRIDIS TEOD. (*HLOROPHYTA*) AND SOME HELIOPHYSICS FACTORS
FLUCTUATIONS

The intensity of growth of periodic culture microalgae *D. viridis*, the protein, triacylglycerides, -carotene contents in its cells within a calendar year in case of standard constant cultivation conditions (constant light exposure, temperature, structure of environment etc.) were investigated. It was revealed that despite of constant cultivation conditions intensity of growth, the protein, triacylglycerides, -carotene contents were characterized by seasonal variability. Negative correlation between intensity of growth of culture of microalgae and absolute values of the solar spots area (electromagnetic radiation of the Sun) and Volf's numbers (corpuscular radiation of the Sun) is revealed. Dependence of the protein, triacylglycerides, -carotene contents from heliophysics factors absolute values had both linear and U-shaped character. Biotropic effects ambiguity of heliophysics factors can specify change dominating biotrophic factors during growth of microalgae *D. viridis* (principle PDF).

Key words : *Dunaliella viridis*, lipid, - carotene, heliophysics factors.

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.. .. // .. - 1997 . - **60**, 2. - . 176-186.
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Dunaliella viridis Teod. // ..
- 19976. - **7**, 1. - . 78-86.
.. ..
// .. - 1998. - 5. - . 153-157.
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(*Chlorophyta*) // .. - 2000. - **10**,
1. - . 22-31.
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.. - 2004. - **49**, 4. - . 742-740.
.. ..
// .. - 715-722.
.. ..
// .. - 2003. - **48**, 2. - . 380-384.
.. ..

11- 22- // . – 2004. – **49**,
.3. – .539-544.
., 1990. – 352 .
.,, *Dunaliella*
Teod., 1973. – 243 .
. *Dunaliella viridis*
Teod. (*Chlorophyta*) // . – 2002. – **12**, 1. – C. 59-68.
. :
// Astroeco. – 2002. – P. 164-166.
. // . – 2003. – **48**, .3. – .546-552.
. (.) // . – 1992. – **37**, .3. – .378-
398.
. // –
2000. – **170**, 2. – .214-218.
.
// . – 2003. – **48**, .2. – .374-379.
Bozhkov A.I., Menzyanova N.G. Age dependence of lipid metabolism and (β-carotene content in cells of
Dunaliella viridis Teod. // . – 1995. – 5, N 1. – C. 34-38.
Davis G.E. Jr., Lowell W.E. Solar cycles and their relationship to human disease and adaptability // Med.
Hypoth. – 2006. – **67**, N 3. – P. 447-461.
Vasilic P.V., Korniyush I.I. Synchronous fluctuations of changing of a white mice body mass in a permalloy
shielding cell // Astroeco. – 2002. – P. 168.

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