The invention refers to biotechnology, in particular to microbiology and may be used for carotenoid obtaining.

Summary of the invention consists in that the proposed process for cultivation of green alga *Haematococcus pluvialis* Flotow includes inoculation of the two-week old green aplanospores from the moment of their transformation from green flagellate cells into green aplanospores on mineral nutrient medium, containing (mg/L):

$NaNO_3$	299...301
KH_2PO_4	19,9…20,1
K_2HPO_4	79,9…80,1
NaCl	19,9…20,1
$CaCl_2$	46,9…47,1
$MgSO_4 \cdot 7H_2O$	9,9…10,1
$ZnSO_4 \cdot 7H_2O$	0,099…0,11
$MnSO_4 \cdot H_2O$	1,49…1,51
$CuSO_4 \cdot 5H_2O$	0,079…0,081
H_3BO_3	0,29…0,31
$(NH_4)_6Mo_7O_{24} \cdot 4H_2O$	0,29…0,31
$FeCl_3 \cdot 6H_2O$	16,9…17,1
$Co(HO_3)_2 \cdot H_2O$	0,19…0,21
EDTA	7,4…7,6

The alga is cultivated on the given nutrient medium during 7 days with a light intensity of 1500…2000x, pH of 6,8…7,2 and a temperature of 25…27°C.

The result of the invention consist in reducing the time for alga cultivation and in increasing the carotenoid productivity.