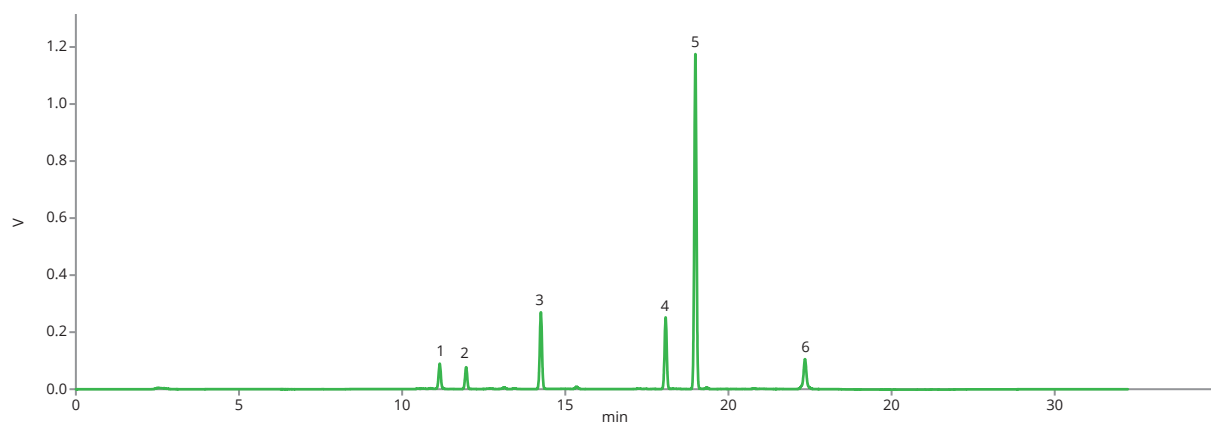
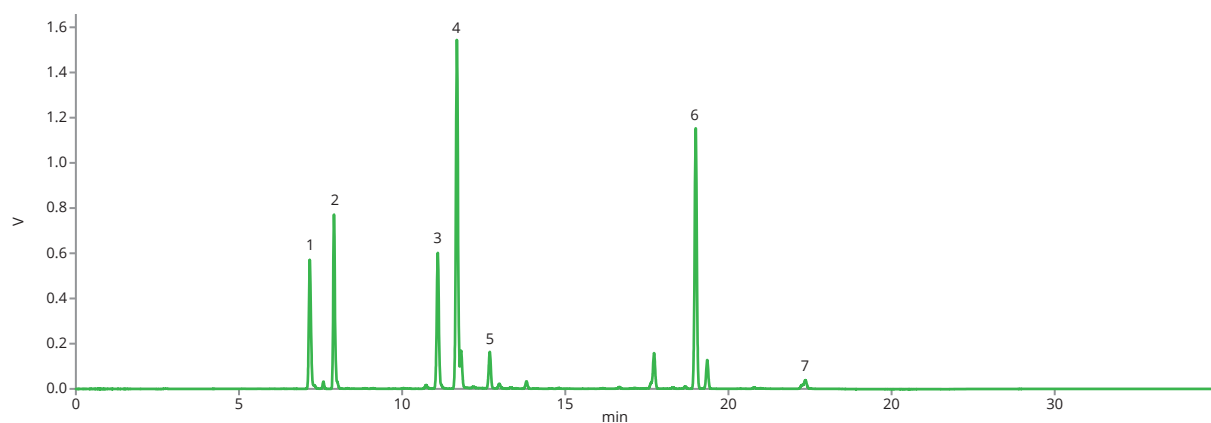


Photosynthetic pigments

This application shows the method of analysis of the main photosynthetic pigments in extracts of Hibiscus leaves and extract from cells of the algae *Emiliana huxleyi*. ASTRA® C18-HE column allows to achieve good separation of the pigments, which is always challenging.



Analysis of the extract of Hibiscus leaves on ASTRA® C18-HE column



Analysis of the extract of Emiliana huxleyi algae cells on ASTRA® C18-HE column

Author of this application: RNDr. Radek Litvín, Ph.D., Faculty of Science, University of South Bohemia in České Budějovice.

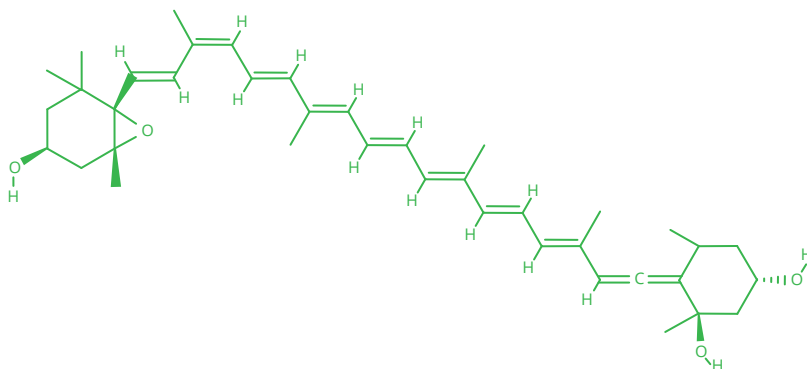


Photosynthetic pigments

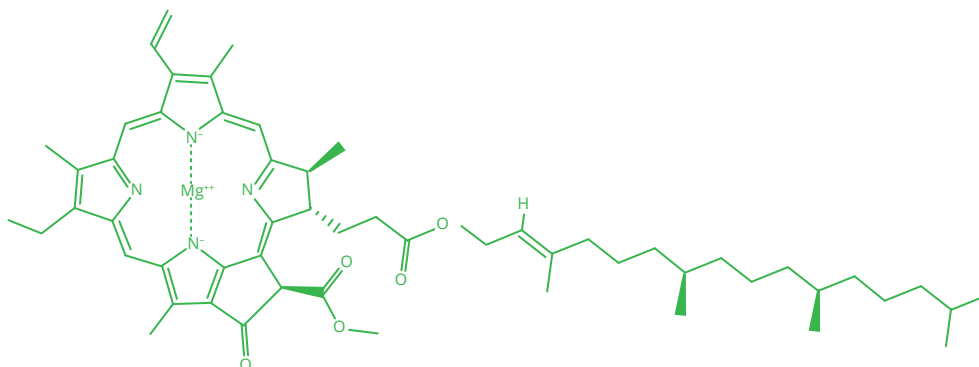
Column	ASTRA® C18, 5 µm			
Dimensions	250 mm × 4.6 mm			
Part number	AST-5732-LM46			
Mobile phase	A: methanol : 0.5M ammonium acetate 80/20 (v/v) B: ACN : water 90/10 (v/v) C: ethyl acetate			
Gradient elution	Time	A (%)	B (%)	C (%)
	0	100	0	0
	4	0	100	0
	18	0	20	80
	20	0	20	80
Temperature	30 °C			
Max. pressure	145 bar			
Detection	UV at 435 nm			
Analytes	Hibiscus extract: 1. Neoxanthin, CAS No. 14660-91-4 2. Violaxanthin, CAS No. 126-29-4 3. Lutein, CAS No. 127-40-2 4. Chlorophyll b, CAS No. 519-62-0 5. Chlorophyll a, CAS No. 479-61-8 6. β-carotene, CAS No. 7235-40-7 Emiliana huxleyi extract: 1. Chlorophyll c2, CAS No. 27736-03-4 2. Chlorophyll c3, CAS No. 111308-93-1 3. Fucoxanthin, CAS No. 3351-86-8 4. 19'-Hexanoyloxyfucoxanthin, CAS No. 60147-85-5 5. Diadinoxanthin, CAS No. 18457-54-0 6. Chlorophyll a, CAS No. 479-61-8 7. β-carotene, CAS No. 7235-40-7			

Note: This column does not solve separation of lutein and zeaxanthin.

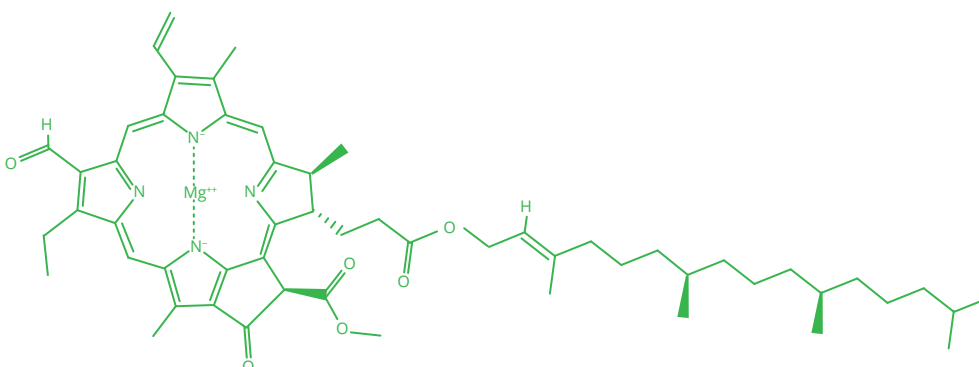
Photosynthetic pigments



Neoxanthin

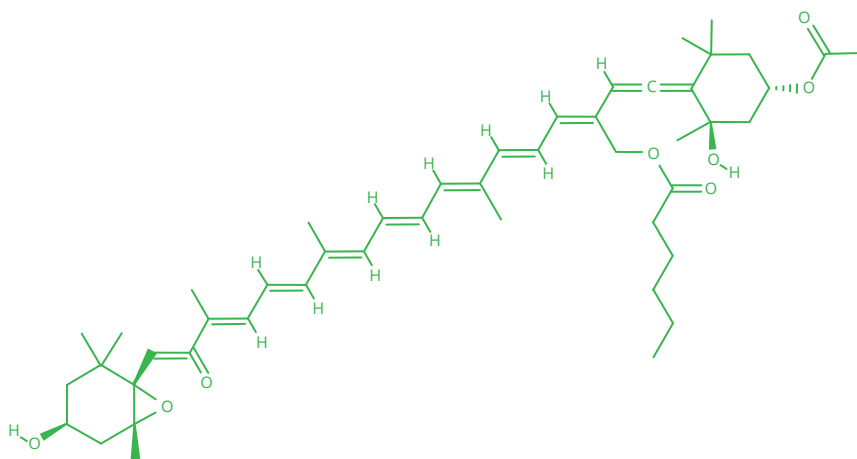


Chlorophyll a

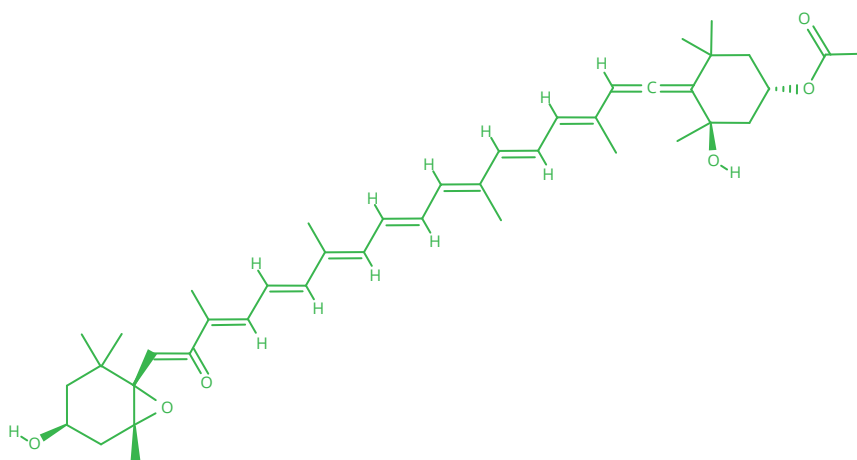


Chlorophyll b

Photosynthetic pigments

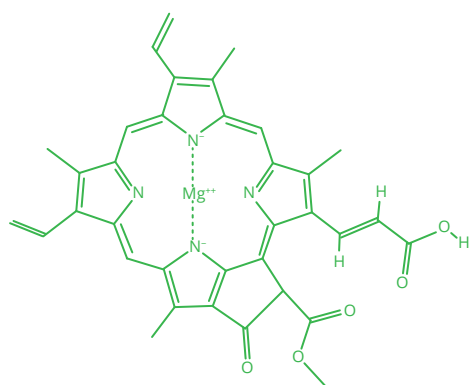


19'-Hexanoyloxyfucoxanthin

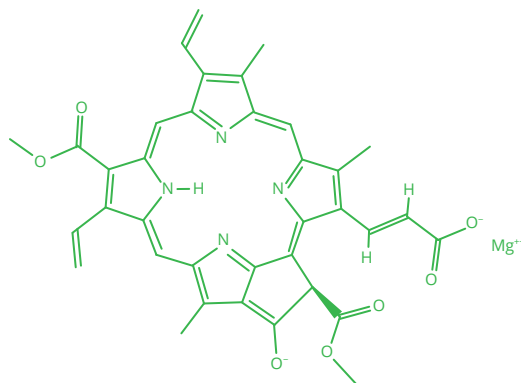


Fucoxanthin

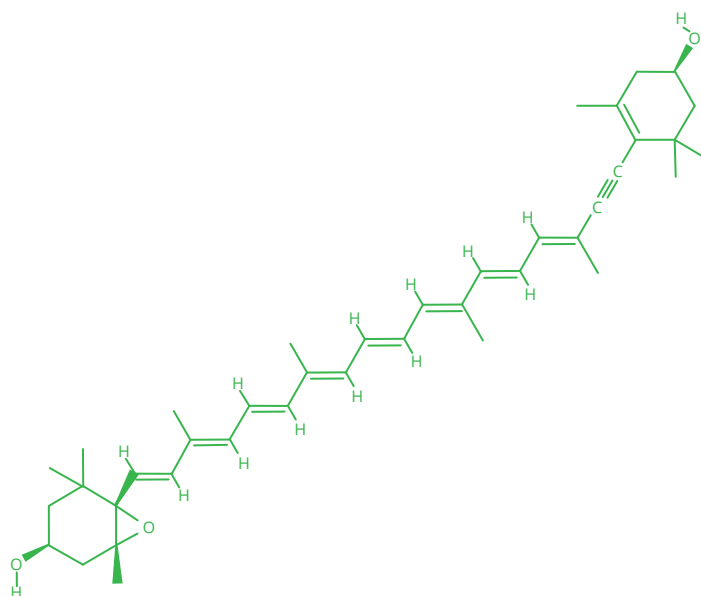
Photosynthetic pigments



Chlorophyll c_2

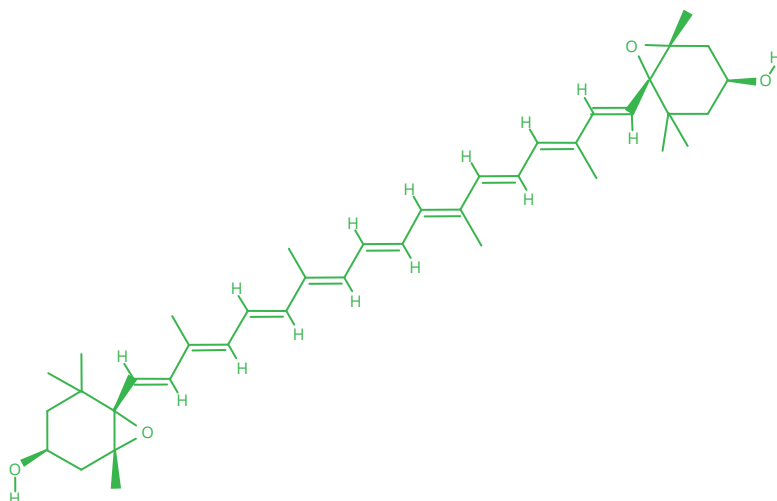


Chlorophyll c_3

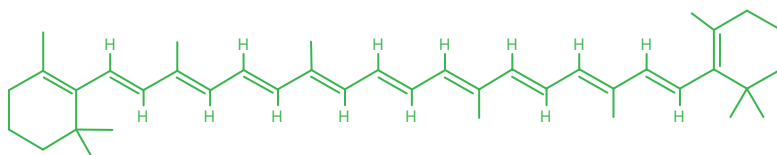


Diadinoxanthin

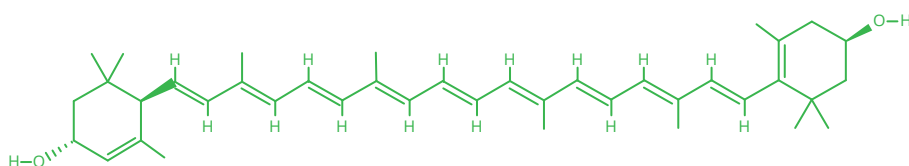
Photosynthetic pigments



Violaxanthin



β -carotene



Lutein