



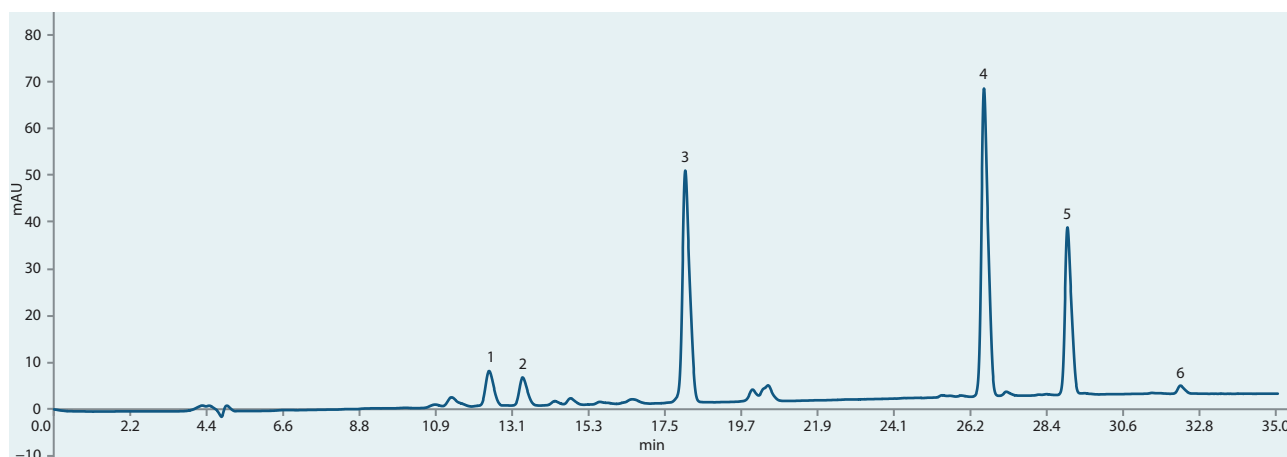
## WHEAT PIGMENTS

## INTRODUCTION

This application has been developed by ALGATECH, Institute of Microbiology of the Academy of Sciences, Czech Republic. Chlorophylls and carotenoids are essential cofactors for the oxygenic photosynthesis. As the content and stoichiometries of individual pigments are significantly varying in plant leaves under different environmental conditions, the quantification of pigments is important for the understanding of plant physiology, but also for the food-quality monitoring.



- Substance:**
- |   |  |
|---|--|
| 1. <b>Neoxanthin, Folixanthin,</b><br>CAS Number 14660-91-4 | 4. <b>Chlorophyll b, <math>\beta</math>-Chlorophyll,</b><br>CAS Number 519-62-0  |
| 2. <b>Violaxanthin,</b><br>CAS Number 126-29-4              | 5. <b>Chlorophyll a, <math>\alpha</math>-Chlorophyll,</b><br>CAS Number 479-61-8 |
| 3. <b>Lutein,</b> CAS Number 127-40-2                       | 6. <b><math>\beta</math>-Carotene,</b> CAS Number 7235-40-7                      |

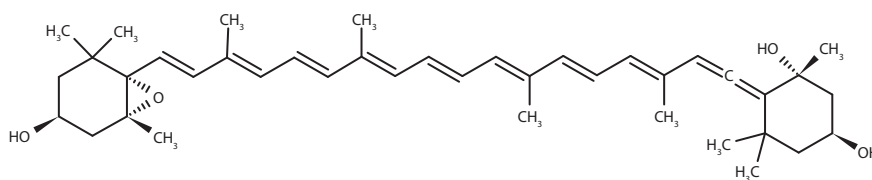


Wheat extract on ARION® column

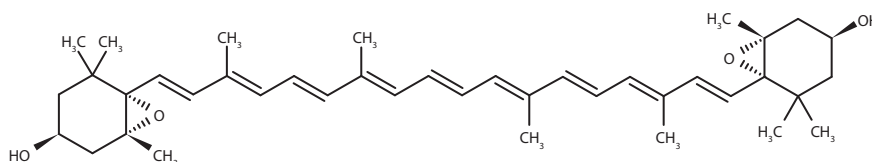
<b>Column</b>	ARION® C8, 5 $\mu$ m
<b>Dimensions</b>	250 mm $\times$ 4.6 mm
<b>Part number</b>	ARI-5734-LM46
<b>Mobile phase</b>	A: Methanol / Acetonitrile / 0.25M pyridine (32 / 14 / 54) B: Methanol / Acetonitrile / Acetone (20 / 60 / 20)
<b>Gradient</b>	Linear gradient of solvent B (60–100 % in 25 min) followed by 100 % solvent B
<b>Flow rate</b>	0.8 ml/min
<b>Temperature</b>	40 °C
<b>Detection</b>	DAD @450 nm
<b>Analytes</b>	1. <b>Neoxanthin</b> 2. <b>Violaxanthin</b> 3. <b>Lutein</b> 4. <b>Chlorophyll b</b> 5. <b>Chlorophyll a</b> 6. <b><math>\beta</math>-Carotene</b>



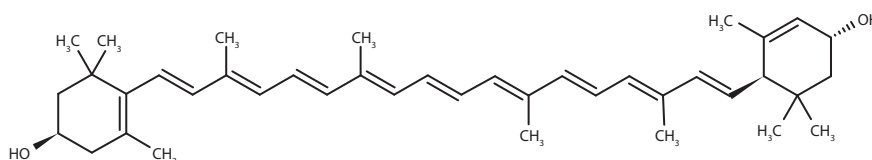
## WHEAT PIGMENTS



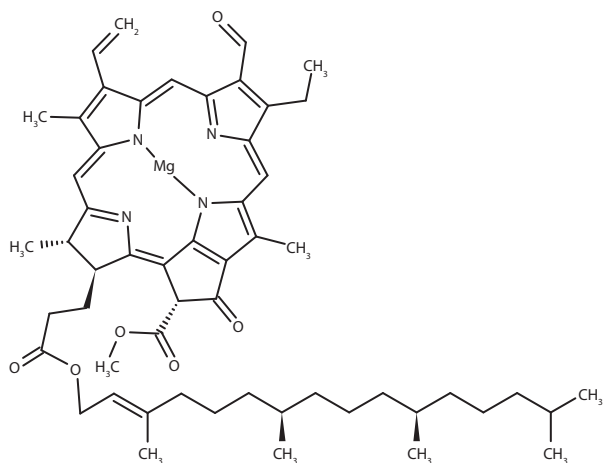
Neoxanthin



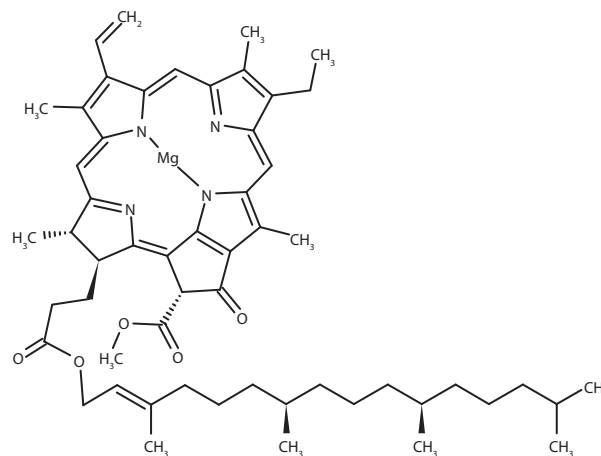
Violaxanthin



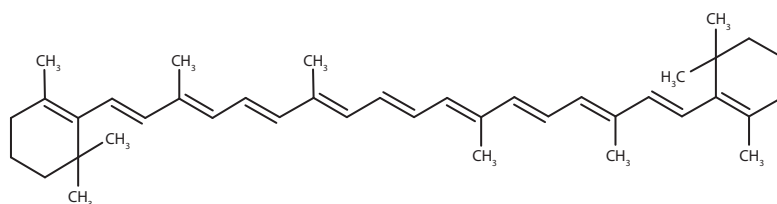
Lutein



Chlorophyll b



Chlorophyll a

 $\beta$ -Carotene

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