Megazyme Building 1,
Bray Business Park,
Bray, Co. Wicklow,
A98 YV29,
Ireland.
Tel: + 353 1 2861220 Fax: + 353 1 2861264

Certificate of Analysis

Product: Glycogen (Algae)
Cat. No: P-GLYAL
Lot. No: 210101
Expiry Date: N/A

Parameter	Specification	Results
Purity	> 75% (dw basis)	77%*
Protein	< 5%	1.5%
Moisture	< 10%	5.2%
Ash	< 1%	0.08%

*(Enzyme incubation using amyloglucosidase, alpha-amylase and isoamylase followed by glucose quantitation).

Properties:

Sugar Composition	Glucose = 100
Solubility	>150 mg/mL

This lot meets our specification.

Signature: 

Date: 08.Feb.2021

Tadas Kargelis
Organic Chemist

(*as this certificate is a computer printout, it has not been signed or dated by hand*)

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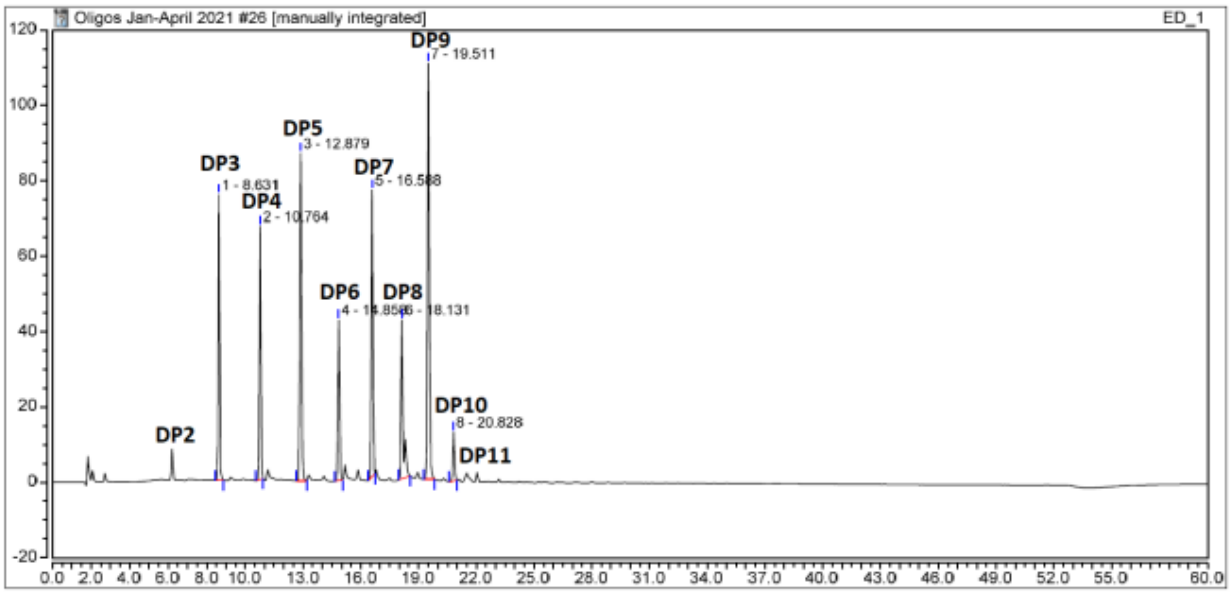
HPAEC-PAD

Column: CarboPac PA200 guard and analytical columns (3 x 250 mm)
Temperature: 30o C
Detector: Au electrode; waveform Carbohydrate, standard quad
Flow rate: 0.5 mL/min
IC system: Dionex ICS5000 + DP system and Chromeleon 7 software
A stepwise linear gradient method was employed as shown.

Time (min)	100 mM NaOH (%)	320 mM NaOAc (%) in 100 mM NaOH
0	100	0
40	0	100
50	0	100
50.5	100	0
60	100	0



HPAEC-PAD chromatogram showing algae glycogen side-chain composition after enzymatic hydrolysis with a purified debranching enzyme (i.e. isoamylase).

Enzymatic hydrolysis conditions: 10 mg of P-GLYAL was incubated with 6 µL of isoamylase E-ISAMYHP (Megazyme) in 1 mL of 0.1 M pH 4.0 Sodium Acetate buffer at 40o C for 90 min. Sample was then centrifuged and supernatant injected on the HPAEC-PAD system.

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