Last updated: July 2021 V.02

CERTIFICATE OF ANALYSIS

Product Name: HomeALG Allophycocyanin (APC)

Product Code: HA-203

Lot Number:

Formulation: HomeALG APC is suspended in 10 mM potassium phosphate, 50% ammonium sulfate, 1 mM EDTA, 1 mM sodium azide, pH 7.0 and must be dialyzed completely against conjugation buffer or PBS before using.

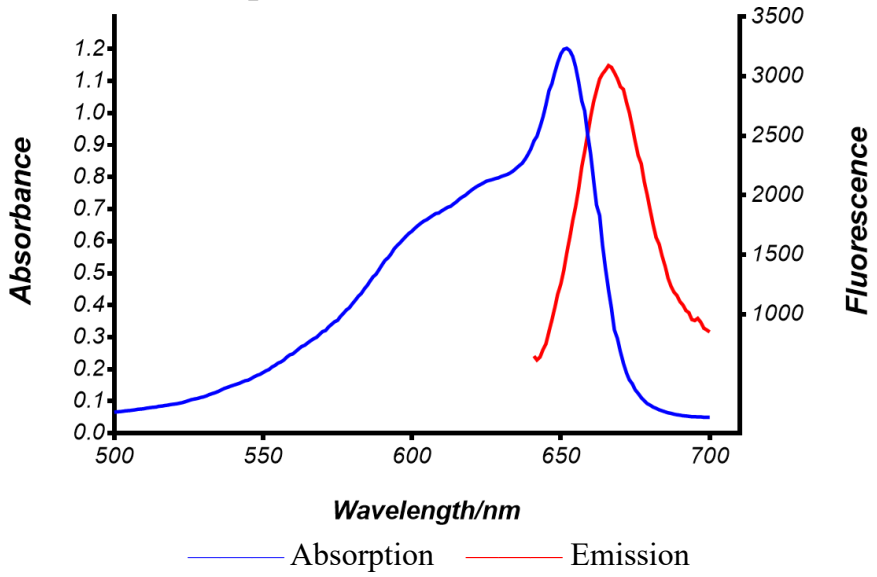
Storage: Store at 4°C in the dark. (**DO *NOT* FREEZE!**)

Expiration: 12 months after date of production.

Quality Control

Parameter	Lot Data	Specification
Concentration[1]	13.3	>10.0 mg/ml
A_{650}/A_{280}[2]	4.52	>4.00
A_{650}/A_{620}[3]	1.54	>1.25

Absorbance and Fluorescence Spectrum



Molecular weight: 104 kDa

Peak locations at 650 nm. Emission λmax = 660 nm

This product has been tested by Quality Control and passed internal specifications.

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Authorized Signature

It is important to note that HomeALG Allophycocyanin (APC) (Product code: HA-203) is preserved in 60% ammonium sulfate as precipitate. Prior to using and testing APC, please make sure to perform a buffer exchange. To calculate the quality of APC, you must measure the absorbance of your stock solution dilution range 0.1~0.2 at 280 nm. Then calculate quality and protein concentration using the following equation:

[1]Determined protein concentration using extinction coefficient.

$$\text{Concentration (mg/ml)} = \frac{\text{Absorbance at } \lambda\text{max } (OD_{650\ nm})}{\text{Extinction coefficient } (700000\ M^{-1}\ cm^{-1}) \times \text{Pathlength (cm)}} \times \text{Molecular weight (105000 g/mol)} \times \text{Dilution factor}$$

[2]A_{650}/A_{280} is indicative of the purity of the preparation with respect to most forms of contaminating protein. Absorbance at 280 nm is primarily due to aromatic amino acids, and thus is roughly proportional to the overall concentration of protein in solution, including APC. Absorbance at 650 nm reflects only the concentration of APC.

[3]*Spirulina* produces both APC and CPC (absorption maximum at 620 nm). An A_{650}/A_{620} >1.25 indicates that the APC is not significantly contaminated with CPC.