

Country

Team

ID Code: 1)

2)

3)



International Junior Science Olympiad,
Pune, India

10th

Time : 3 hrs

Marks : 40

Experimental Tasks



Task **C** : Extraction of lycopene from tomato

Total Marks: 6.0

Absorbance of extract:

C.Q1 Observation Table C.1

[3.5 Marks]

	Current in mA	Blue LED	White LED
1	I_s		
2	I_l		
Percentage of light transmitted			

Questions

C.Q2

[1.0 Mark]

If the test tube **Ab** (containing the solvent) was removed from between the photodiode and the white LED,

- a) The current measured would be less than I_s
- b) The current measured would be more than I_s
- c) The current measured would be equal to I_s

Write the correct option in the box below.

C.Q3

[1.5 Marks]

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Which of the following can you *deduce from your observations in the experiments* on transmitted light. Indicate your answers as YES (Y) or NO (N) in the table below.

- a) Lycopene absorbs more blue light relative to other parts of the visible spectrum.
- b) Lycopene preferentially absorbs light in the red and yellow parts of the spectrum.
- c) Lycopene is an antioxidant.
- d) Red and yellow parts of the spectrum are absorbed relatively less compared to blue parts of the spectrum.
- e) Blue light passes through the solution better compared to red light.
- f) Lycopene absorbs light equally across the spectrum.

a)	
b)	
c)	
d)	
e)	
f)	