

PM1A Fundamentals of Physiology 2016-17

ANALYSIS OF THE LACTASE DATA

Name:

Student number:

1. Observing the reaction

What happens when you add the extract from the tablet to the ONPG? Write down your observations below

Do the Lamberts lactase complex tablets contain active lactase enzyme?

2. Control versus reaction

Note the absorbance for the two samples, and subtract the control from the reaction value.

Reaction absorbance

Control absorbance

minus

equals

Reaction minus control

Why is it useful to subtract the control absorbance from the reaction absorbance?

Why does adding Sodium Carbonate to the tube stop the reaction?

3. Evaluating the impact of temperature

Record the control and reaction values for each temperature (ice bucket, room temperature and 37°C water bath).

	Reaction absorbance		Control absorbance		Reaction minus control
Ice bucket	<input type="text"/>	minus	<input type="text"/>	equals	<input type="text"/>
RT	<input type="text"/>	minus	<input type="text"/>	equals	<input type="text"/>
37°C	<input type="text"/>	minus	<input type="text"/>	equals	<input type="text"/>

What are the differences between the values recorded at the three temperatures?

Why would temperature make a difference to the lactase reaction?

What would you have to do to be confident that the differences due to temperature are real?