

Date:..... Name:..... Study group:.....

Report form

Practical lesson – Photometry

Task 1 – Identification of an unknown substance using its absorption spectrum

Principle:

Results:

Sample (beverage) $\lambda_{Amax} = \dots\dots\dots \text{nm}$

E131 $\lambda_{Amax} = \dots\dots\dots \text{nm}$

E132 $\lambda_{Amax} = \dots\dots\dots \text{nm}$

E133 $\lambda_{Amax} = \dots\dots\dots \text{nm}$

The dye identified in sample (beverage) is:.....

Assessment of potential risks associated with the use of the identified colouring agent in food:

Task 2 – Quantification of a substance in solution using photometry

Principle:

Results:

Table 1: Concentration/dilution of analysed samples

<i>Sample</i>	<i>Blank</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
<i>Volume of stock solution</i>	<i>0 mL</i>	<i>2 mL</i>	<i>1 mL of solution A</i>	<i>1 mL of solution B</i>	<i>1 mL of solution C</i>
<i>Volume of water</i>	<i>1 mL</i>	<i>0 mL</i>	<i>1 mL</i>	<i>1 mL</i>	<i>1 mL</i>
<i>Dilution factor</i>	<i>---</i>	<i>1 × (non-diluted solution)</i>			
<i>Concentration</i>	<i>0 µg/mL</i>	<i>7.5 µg/mL</i>			

Table 2: Measured absorbance (A) values

Solution	A	B	C	D
<i>Absorbance 1</i>				
<i>Absorbance 2</i>				
<i>Absorbance 3</i>				
<i>Mean</i>				

Sample Absorbance (A) =

Total amount of blue dye in 500 mL of beverage:mg