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# **Mastership in Chemical Analysis**

**Part C Examination**

**Glasgow Scientific Services**

**Wednesday 7<sup>th</sup> September 2022**

**09:00 to 17:00**

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**Section 1: Communication in the form of formal certificates**

**Prepare appropriate official certificates for the following samples:**

1. A sample of vacuum-packed Honey Roast Smoked Salmon (with a shelf-life of 21 days) gave the following results of analysis and microbiological examination:

Moisture	57.86	g/100g
Water Activity	0.99	
pH	6.2	
Chloride	0.4	g/100g
Salt in Aqueous Phase	1.1	%
Colony Count	3.8 x 10 <sup>5</sup>	cfu per g
<i>Enterobacteriaceae</i>	<100	cfu per g
<i>Escherichia coli</i>	<10	cfu per g
Coagulase Positive <i>Staphylococci</i>	<10	cfu per g
<i>Clostridium perfringens</i>	<10	cfu per g
<i>Listeria species</i>	<10	cfu per g
<i>Listeria monocytogenes</i>	detected in 25g	
<i>Listeria monocytogenes</i>	200	cfu per g

**(10 marks)**

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2. Milk chocolate, with declarations:  
cocoa solids 20% minimum; milk solids 20% minimum

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**Section 3: Problem solving**

**Please investigate the following:**

7. A number of residents in a care home have taken ill after a birthday lunch.

The menu consisted of the following:

Cheese and onion sandwiches

Tuna and mayonnaise sandwiches

Smoked Salmon and Cream Cheese sandwiches

Sausage Rolls

Chocolate Cake

Victoria Sponge cake

Orange & Apple Juice

Tea, Coffee

**(20 marks)**

8. Consumer complaint that bacon is of poor quality, please investigate.

**(20 marks)**

**END OF PAPER**