Question 31 (6 marks)

(a) A student collected a 250 mL sample of water from a local dam for analysis. The data collected are shown in the table.

Mass of filter paper	0.23 g		
Mass of filter paper and solid	0.47 g		
Mass of evaporating basin	43.53 g	2	
Mass of basin and solid remaining	44.67 g	\$1.49	solid

(i)	The water was filtered and the filtrate evaporated to dryness.	2
	Calculate the percentage of the total dissolved solids in the dam sample. The fotal dissolved solids is equal to:	
	1. A 3	
	1. H 3 250 ML X (00	
	= 0.456%	
(ii)	It is suspected that the water in the dam has a high concentration of chloride ions.	2
	Describe a chemical test that could be carried out on the water sample to determine the presence of chloride ions. Include an equation in your answer.	
	if you add Silver nitrate and a	
	precipitale forms, CI ions could be present	
	AgNO3 + CI -> Ag CI + NO3 insoldle soluble	
	Question 31 continues on page 24 precipitate	

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Question 31 (continued)

(b) Name an ion other than chloride that commonly pollutes waterways, and identify its source and the effect of its presence on water quality.

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