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SAMPLE: Sodium chloride

1) **IDENTIFICATION REACTIONS OF IONS**

2) **AgNO3 (aq) + NaCl (aq) —> AgCl (s) + NaNO3 (aq)**

- **CATIONS** *(describe briefly reactions)***:**

Na + AgNO3 —> NaNO3 (aq) no precipitate

Na + HNO3 —> NaNO3 (aq) no precipitate

Ag+ (waste) + SCN- —> AgSCN (s) The excess of thiocyanate re<cts with Fe 3+ to form a dark red complex, When the silver ions have reacted.

Fe 3+ + SCN —> [FeSCN]2+

- **ANIONS** *(describe briefly reactions)***:**

Cl- + AgNO3 —> AgCl (s) precipitate

2) **ASSAY**

Volumetric solutions: 0'1M silver nitrate

Titre of volumetric solutions: 0'9998

Titration No.	m [g] *(4 decimal places)*	Consumption of VS [ml]	ASSAY
1.	0.9968	8.21	98.8345
2.	0.9954	8.12	99.4965
3.	1.0045	8.45	96.6960
4.	1.0354	7.89	97.0027
		Average	98.0074

CALCULATION PROCEDURE:

STATISTICAL EVALUATION:

Range:	**R = 2.8005**
Standard deviation *(estimated from range)***:**	**sd = 1.3602**
Relative standard deviation:	**RSD = 1.3879**

CONCLUSION *(does your sample meet/not meet Ph. Eur)***: The sample do not meet Ph. Eur, because the value 98.0074 is not in the interval 99.0-100.5.**