1962 Collaborator Number 23

REPORT ON CHLORIDE ANALYSIS

% C H L O R I D E

Sample Number	PROCEDURE I			PROCEDURE II		
	1	2	Ave.	1	2	Ave.
1	1.87	1.88	1.88	1.88	1.85	1.86
2	1.92	1.91	1.92	1.97	1.96	1.97
3	.630	.626	.628	.641	.602	.622
4	.667	.673	.670	.681	.675	.678
5	.338	.336	.337	.358	.347	.352
6	1.10	1.09	1.10	1.13	1.12	1.13

Procedure I: What was your equivalence point potential? +74 mv.

What make of pH meter did you use? Beckman Model H-2.

Procedure II: Make of automatic titrator used was Radiometer Model TTT1a.

Comments: We were unable to obtain reproducible titration curves with our instrument employing the specified electrodes - namely, platinum and calomel in our case. Replacement of the standard calomel type (with KCl salt bridge) by one utilizing a saturated K_2SO_4 solution did not improve the situation. Finally, as a result of our inability to arrive at a reproducible equivalence point potential, it was decided to titrate the tobacco samples supplied manually. Therefore, the results shown under "Procedure II" above were not obtained via an automatic technique as recommended. We realize of course that the apparent lack of reproduceability would not have been a problem if we had been able to use the Sargent-Malmstadt Automatic Titrator.

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REPORT ON CHLORIDE ANALYSIS (cont'd)

Comments (cont'd)

The procedure employed in this laboratory for the determination of chloride is very similar to Procedure I, the main difference being that the titration is performed automatically to an equivalence point potential of -28 mv. Another minor difference is the use of .05 N $AgNO_3$ instead of 0.1 N.

Although the information was not requested for your current survey, the samples provided were analysed for chloride content by our routine procedure (i.e. automatically with silver and glass electrode pair). The results which may be of interest to you are shown below:

Sample No.	% Chloride		
	1	2	Ave.
1	1.88	1.87	1.88
2	1.94	1.94	1.94
3	.618	.615	.617
4	.696	.689	.693
5	.347	.344	.346
6	1.11	1.11	1.11

They appear to be in reasonable agreement with the data obtained by procedures I and II.

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