

on. When the evolution of nitrogen slows up, carbon dioxide from the generator is turned on, but also here the rate is of importance since sweeping too fast may give high results. After all the nitrogen has been swept out, which is indicated by the size of the bubbles, that is, if they are practically the same size as before starting the determination, the stop-cock between the combustion tube and the absorption tube is closed, while that between the generator and the combustion tube is left open.

The gas is now transferred from the absorption apparatus to the burette by opening the 3-way stop-cock, in the proper direction, also the stop-cock on the the capillary tube between it and the burette, and forcing the gas over by raising the levelling bulb attached to F, and lowering the one attached to G. The upper meniscus of the bubble is stopped at the zero mark, and the lower one read after about 15 minutes, to allow the potassium hydroxide solution to drain down the sides of the tube and the gas to attain the temperature of the water. The volume of gas is now read off from the curve, corresponding to the distance occupied by the gas, and the percent nitrogen calculated.

Results.

Using the above described method the following results were

Substance	Wt. of Sample in gms.	Vo. of N. in c.c.	Tem. °C	Bar mm.	%N Found	%N Calc.
obtained:						
Diphenyl Urea . . .	{ 0,0123	1,475	23	747,4	13,36	
	{ 0,0202	2,360	23	748,6	13,04	
	{ 0,0208	2,540	23,5	738,1	13,40	
	{ 0,0124	1,475	23	738,7	13,11	
	{ 0,0141	1,695	23	738,7	13,24	
					<u>13,23</u>	<u>13,20</u>
Dinitro Durene . . .	{ 0,0356	4,04	22	731,8	12,43	
	{ 0,0171	1,94	23	740,5	12,50	
					<u>12,47</u>	<u>12,50</u>
Acetyl deriv. of Diamino Durene . . .	{ 0,0132	1,350	22,5	738,8	11,30	
	{ 0,0148	1,525	23	739,6	11,36	
					<u>11,33</u>	<u>11,29</u>

Substance	Wt. of Sample in gms.	Vo. of N. in c. c.	Tem. °C	Bar. mm	%N	
					Found	Calc.
Azobenzene	0,0140	1,960	24,5	741,6	15,37	
	0,0169	2,375	22,5	741,6	15,57	
					<u>15,47</u>	<u>15,38</u>
Diacetyl	0,0199	1,875	21,5	741,6	10,54	
Hydrazobenzene	0,0187	1,775	21,5	743,5	10,60	
					<u>10,57</u>	<u>10,44</u>
Dinitro Durylic	0,0251	2,000	22	742,6	8,66	
Acid Bromide	0,0180	1,463	24,5	732,5	8,82	
					<u>8,74</u>	<u>8,83</u>
Hydrazine	0,0228	4,550	23,5	730,0	21,66	
Sulphate	0,0166	3,305	23,75	730,0	21,60	
					<u>21,63</u>	<u>21,52</u>
O-acetotoluide	0,0197	1,662	23,5	743,3	9,33	
	0,0178	1,500	22,5	744,1	9,37	
	0,0192	1,675	22	734,1	9,58	
	0,0228	1,975	21,5	735,6	9,53	
					<u>9,45</u>	<u>9,39</u>
Uric Acid	0,0109	3,300	25	744,6	33,32	
	0,0112	3,325	22	743,9	33,10	
					<u>33,21</u>	<u>33,31</u>
Malondiamide	0,0158	3,825	20,5	754,1	27,52	
	0,0162	3,950	22	753,9	27,54	
					<u>27,53</u>	<u>27,46</u>
Hexamethylene- tetramine	0,0215	7,750	21,5	740,6	40,06	
	0,0202	7,725	24	739,1	39,98	
					<u>40,02</u>	<u>39,95</u>
P-Nitraniline	0,0186	3,45	23	734,4	20,31	
	0,1700	3,15	21,5	730,5	20,31	
					<u>20,31</u>	<u>20,28</u>
Benzoylalanine	0,0197	1,30	23,5	731,3	7,18	
	0,0188	1,24	23,5	743,6	7,29	
					<u>7,24</u>	<u>7,25</u>

Summary.

1. A semi-micro method based upon PREGL's excellent micro-method for the determination of nitrogen in organic compounds has been described.

2. The method yields results which compare favorably with the results obtained by the use of other methods in use at the present time.
