SUPPLEMENTARY NOTE ON THE ANALYSIS OF WHITE PEPPER.

BY W. F. K. STOCK, F.C.S., F.I.C.

AT the reading of a previous paper on the Adulteration of White Pepper (*THE ANALYST*, vol. xvi., p. 224), some misapprehension appeared to arise in respect of the effect of "grading" white pepper. I stated (p. 226) that "by no process of grading can the normal relation of the ash constituents of the *kernels* be disturbed," and this, judging from some remarks which afterwards fell from the President, seems to have been taken as meaning that white pepper could not be graded. That was evidently a mistake, for there are no fewer than six or eight "grades" of commercial ground white pepper, and the point which I especially wished to bring before the Society of Public Analysts was, not that grading could not be done, but that it could not increase the proportion of ash beyond certain limits, and, more particularly, that it could not account for the presence of an abnormal proportion of calcium compounds in the ash of pepper.

As a means of removing doubt, I have made some further experiments upon the subject, and the results recorded below appear to me to prove my point beyond question.

A large sample of good quality commercial "decorticated" peppercorns was purchased. It was found to be nearly free from husk, and to consist almost entirely of the kernels.

These peppercorns were carefully ground and "graded" in the Laboratory, and they yielded the following percentage proportions:—

No. 1	Grains exceeding 1/16th in. diameter	...	...	17.63
No. 2	„ between 1/16th in. and 1/36th in. diameter	..	32.06	
No. 3	„ „ 1/36th in. and 1/70th in.	„	26.76	
No. 4	„ below 1/70th in. diameter	...	23.55	
				<u>100.00</u>

No. 5. The same peppercorns ground but not graded.

The five samples thus got were analysed with the following results:—

Determination.	No. 1 Grade.	No. 2 Grade.	No. 3 Grade.	No. 4 Grade.	No. 5 Not Graded.
Water	14.12	14.38	14.04	15.10	14.24
Fibre	.41	.65	.55	.65	.48
Ash	1.25	1.15	1.23	1.23	1.13
Lime in Pepper calculated to Carbonate ...	.29	.32	.30	.39	.32
Percentage Proportion of Lime to Ash in } terms of Carbonate	23.5	27.9	24.3	31.7	28.3

I claim that the constancy of the ash percentages in the above table prove my point conclusively. I may be met with the objection that there are marked discrepancies in the ratios of Lime to Ash in terms of Carbonate. I am quite willing to admit that there are discrepancies, but members of this Society will hardly need to be told that *pure* pepper seldom yields, by simple ignition, an equally pure ash. I have made no attempt to elaborate the experiments by freeing the ash from residual carbon, etc., preferring to work upon the simple lines laid down in the paper already contributed.

The President wished to take the opportunity of making an explanation. It would be remembered that some time ago Mr. Stock was good enough to write a paper on pepper. In the discussion which followed, he (Mr. Hehner) made what he then thought were some quite innocent remarks, referring the members to a paper which he had read about that time on the grading of peppers. Mr. Stock had asked him to remove the wrong impression which he thought his (Mr. Hehner's) remarks had created. He might without any hesitation say that the paper in question—an abstract of which had since appeared in *THE ANALYST**—referred to black peppers and not to white peppers, whilst

* Volume xvi., p. 235.

Mr. Stock's remarks were entirely directed to white. He (Mr. Hehner) wished to congratulate himself and the Members of the Society that his few remarks had led Mr. Stock to further enlighten them on the subject.

The two following papers were read by the Secretary :—