

NOTES ON AMYL NITRITE.*

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Information on the flash point of a specimen of amyl nitrite, labeled U. S. P., was requested by the Mail Division of the Post Office Department.

The boiling temperature for amyl nitrite is generally given as 96° to 99° C., this range being prescribed in the U. S. Pharmacopœia, 7th revision. A preliminary test made with the sample submitted showed that the flash point was much lower than had been expected. Another supply of the same brand of amyl nitrite was then cooled with a freezing mixture and at this low temperature introduced into the flash point apparatus. The flash point taken immediately showed that the article flashed at 3° C. (37° F.). How much lower it would flash was not determined. The Postal Regulations deny the use of the mails to inflammable materials, such as gasoline and denatured alcohol, "and all liquids having a flash point at or below 80° F."

From this observation it was believed that some products with boiling points lower than that of the generally recognized amyl nitrite must be present. This drug generally complies with the present Pharmacopœial requirements.

Two different makes were submitted to fractional distillation with the following results:

Brand 1:		
° C.	Cc.	Per cent. by volume.
68-81	3.5	5.4
81-88	11.5	17.7
88-97	30.0	46.2
97-102	6.0	9.2
Residue and loss	14.0	21.5
Brand 2:		
71-81	2.5	5.5
81-89	10.0	22.2
89-96	15.0	33.3
96-102	11.0	24.4
Residue and loss	6.5	14.6

From this range of temperatures it is evident that the amyl nitrites tested contain considerable quantities of substances boiling below and above the recognized boiling range for amyl nitrite. To what extent such mixtures would differ therapeutically from amyl nitrite boiling within a definite recognized range is a matter that should be considered.

The subject of amyl nitrite was so thoroughly considered historically, chemically, and industrially by Frank O. Taylor² that we can do no better than to refer the reader to that exhaustive communication. We desire however, to quote two portions of his summary: "1. That the character of amyl nitrite on the market today is, as a whole, mediocre, with a little very good and other small part very bad. 2. That with proper care first-class amyl nitrite may be made commercially."

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² JOUR. A. PH. A., 3, 1327, 1466, and 1584, 1914.