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On the Mercurial Bases. By Dr. OTTO SCHMIEDER.

THE compound which is obtained when oxide of mercury is brought in contact with ammonia was first investigated by Guibourt, who regarded it as a direct compound of these two bodies, and supposed that its constitution was such that the hydrogen of the ammonia was exactly sufficient to convert the oxygen of the oxide into water. Subsequent investigations by Thenard, Fourcroy, Hennele, and Mitscherlich led to the supposition that the bodies produced by the action of ammonia upon the salts of mercury were also to be regarded as compounds of oxide of mercury with ammonia. According to this view oxide of mercury and ammonia is $= 3 \text{ HgO} + \text{NH}^3 + 2 \text{ Aq}$, and white precipitate (Mitscherlich) $= 2 \text{ HgO} + \text{NH}^4 \text{ Cl}$.

Kane, in accordance with his amide-theory, assumed in these ammoniacal compounds the presence of his hypothetical radical amide or amidogen, NH^2 , which he considered to possess the property of forming direct compounds with mercury. In this view the white precipitate does not consist of a compound of oxide of mercury and muriate of ammonia; Kane showed rather that it contained neither oxide of mercury nor water, but was to be regarded as a compound of perchloride of mercury and amidide of mercury, $\text{HgNH}^2 + \text{HgCl}$. In the same way, according to this theory, the direct compound of oxide of mercury and ammonia is $= \text{HgNH}^2 + 3 \text{ HgO}$, the yellow product of the decomposition of white precipitate $= \text{HgNH}^2 + \text{HgCl} + 2 \text{ HgO}$, and ammonia-turpeth $= \text{HgNH}^2 + 3 \text{ HgO} + \text{SO}^3$.

According to Millon's view, the body produced by the action of ammonia upon oxide of mercury behaves as a strong base, furnishes constant compounds with acids, and sets ammonia free from its salts.

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