



Composition of phosphate of ammonia and magnesia

M. Fresenius

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cases it is sufficient to employ a vacuum with sulphuric acid and potash to obtain chloro-acetic acid in a state of great purity. This process possesses the advantage of also obtaining as a secondary product, a considerable quantity of sesquichloride of carbon.—*Ann. de Ch. et de Phys.*, Jan. 1846.

COMPOSITION OF PHOSPHATE OF AMMONIA AND MAGNESIA.

BY M. FRESENIUS.

The erroneous statements contained in chemical treatises with respect to the ammoniaco-magnesian phosphate have given inaccurate results as to the proportions of magnesia indicated by this salt, and they have also prevented its being employed in estimating the quantity of phosphoric acid. M. Fresenius has discovered that the double salt in question is absolutely insoluble in free ammonia, so that it may be employed in quantitative analysis.

He ascertained the solubility of this salt in water, solution of ammonia, solution of hydrochlorate of ammonia, and in a mixed solution of ammonia and hydrochlorate. He found it dissolved by 15293 parts of water at the usual temperature, and requires a mean quantity of 44330 parts of ammoniacal water for solution, so that one part of magnesia, in the form of this salt, requires 120760 parts of water, and one part of phosphoric acid 70000. According to these statements this salt may be for a long time washed with ammoniacal water before dissolving a very minute fraction of a grain either of magnesia or phosphoric acid.

As to solution of hydrochlorate of ammonia, one part of the double salt is dissolved by 7548 parts of it, and by 15627 parts of a mixed solution of ammonia and hydrochlorate; sal-ammoniac therefore slightly increases the solubility of the salt; still however this solubility is so slight as to be inappreciable in estimating its quantity.

M. Fresenius has also performed some comparative experiments to ascertain if the double phosphate would answer for analyses.

He analysed a determinate quantity of very pure sulphate of magnesia; by calculation the magnesia was estimated at 34.01 per cent.; experiment gave 34.0 and 34.02 per cent.; the phosphoric acid of phosphate of magnesia was calculated at 19.90 per cent., while experiment gave 19.87.—*Journ. de Pharm. et de Ch.*, Dec. 1845.

COMPOSITION OF COMMON PHOSPHATE OF SODA.

M. Fresenius states that the undermentioned chemists found this salt to consist of

	Berzelius.	Malaguti.	Graham.	Clark.
Phosphoric acid	20.33	18.80	37.1	37.48
Soda	17.67	16.71		
Water	62.00	64.25		
	100.00	99.76	100.00	100.00

M. Fresenius found 19.87 of phosphoric acid and 62.67 of water;