

1000 parts of the compound salt of carbonate and hydrate of zinc consist of,

Carbonate of zinc = 400	{	Carbonic acid = $\frac{400}{3}$ = - - -	$133\frac{1}{3}$
		Calx of zinc = $\frac{400 \times 2}{3}$ = $266\frac{2}{3}$	} = - $716\frac{2}{3}$
Hydrate of zinc = 600	{	Calx of zinc = $\frac{600 \times 3}{4}$ = 450	
		Ice - - = $\frac{600}{4}$ = - - -	150
			1000.

Great as is the agreement between the quantities of the last column and those obtained by the analysis of the Bleyberg calamine, (page 15,) it would be yet more perfect, probably, had there been, in this instance, no sources of fallacy but those attached to chemical operations, such as errors of weighing, waste, &c. but the differences which exist are owing, in some measure at least, to the admixture of carbonate of lime and carbonate of lead, in the calamine analysed, and also to some portion of water, which is undoubtedly contained, in the state of moisture, in so porous and bibulous a body.

It has also appeared, in the experiments on the Mendip Hill calamine, that acids indicate a greater quantity of carbonic acid than fire does, by $\frac{22}{1000}$. If we make this deduction for dissolved water, it reduces the quantity of carbonic acid in the Bleyberg calamine, to 0.1321.

If we assume this quantity of carbonic acid as the datum to calculate, on this system, the composition of the calamine from Bleyberg, we shall obtain the following results: