

rish, in his "Practical Pharmacy," attaches to the original recipe the statement that "each teaspoonful of the syrup contains about two and a half grains phosphate of calcium and one grain phosphate of iron," and this has apparently been adopted without question by various writers on the subject, who have furnished us with what was meant to be improved formulæ. On closer examination, however, we perceive that a decision is not so easily arrived at. If we consider the quantities of iron and lime salts ordered by Parrish in his formula in relation to the bulk of the finished product, we find that such a strength is absolutely impossible, and that the statement must have been the result of a miscalculation, while inaccuracy in figures is, unfortunately, not singular in the work in question. In the paper on "Phosphate Syrups," published in the *Journals* last April, I was at some pains to state this matter as clearly as I could, and trusted the question of strength might be taken up and discussed. Since then three papers have appeared on the subject, one by Mr. Earnest C. Saunders in the *Pharmaceutical Journal* for July 15, and another by an anonymous contributor in the last issue of the *Chemist and Druggist*, both of whom, on the question of strength, fall back on the statement the accuracy of which is questioned. The third paper is by Mr. E. B. Shuttleworth, in the *CANADIAN PHARMACEUTICAL JOURNAL* for August, and appeared in our own *Journal* for the 26th of the same month. In it Mr. Shuttleworth seems to accept the result of the formula as the standard, and to my knowledge many others hold the same opinion. In appealing to this Conference I trust we may be enabled to come to a decision which shall serve as a guide so long as we must follow an empirical formula for the preparation of this valuable remedy.

For the sake of those who may not have read the former paper I shall endeavor to state as concisely as possible the more important points. In Parrish's formula there are ordered 10 drachms sulphate of iron, which would produce 257.5 grains triferrous phosphate, were none wasted in following the process, and the finished syrup measures as nearly as possible 45 fluid ounces, or 360 fluid drachms. Were all this iron utilized we would only have .715 grains per fluid drachm, and if allowance be made for loss through imperfect precipitation, we have almost exactly half a grain (.501) per fluid drachm. The lime, also, is over stated. Twelve drachms of phosphate of calcium, the quantity ordered in the formula, gives exactly 2 grains per fluid drachm, and this makes no allowance for any moisture, which is present to a large extent in commercial samples, nor for loss in the re-precipitation and washing which Parrish directs. You will therefore follow me, that the syrup prepared according to Parrish's own directions cannot contain as tribasic phosphates the quantities of lime and iron which he asserts, but that something less than 2 grains of phosphate of calcium, and $\frac{1}{2}$ grain phosphate of iron per fluid drachm is the extreme result of the formula. This same