

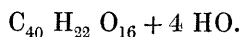
II.—On *Populin*.

BY RAFAELLE PIRIA.

(FROM A LETTER TO DR. HOFMANN.)

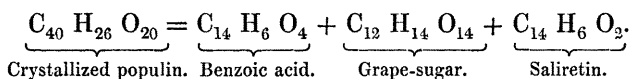
Since my return to Italy, I have been engaged with the investigation of a crystalline substance, discovered, as you will recollect, by Braconnot in the leaves and bark of *Populus tremula*, and described by this chemist under the name of *Populin*. The composition and the reactions of this compound have remained unknown up to the present moment. From the following note, which gives you the results I have as yet obtained, you will see that populin is closely connected with several of the best known series of organic chemistry.

The composition of populin is represented by

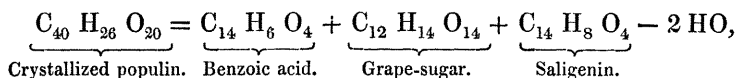


This formula, the result of direct analysis, is moreover confirmed by the deportment exhibited by this substance, when submitted to the influences of chemical agents.

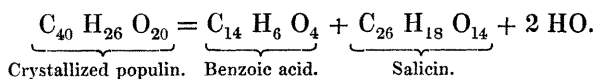
On heating populin with dilute acids, it is decomposed into benzoic acid, grape-sugar, and saliretin, and you will observe that the above formula of crystallized populin exactly represents the sum of the elements of one equivalent of each of these substances.



Since saliretin is a product of the action of acids on saligenin, populin may be viewed as a conjugate compound of benzoic acid with saligenin and grape-sugar.



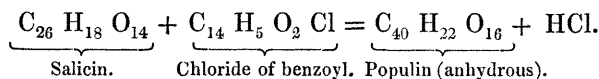
or, what amounts to exactly the same thing, as a conjugate compound of benzoic acid with salicin itself:



The relations which I have pointed out induced me to try whether

populin might not be converted into salicin. Nothing in fact is easier: it suffices to boil a solution of populin with baryta-water; you obtain a perfectly limpid liquid which contains nothing except benzoate of baryta and salicin. I have compared the chemical and physical properties of salicin thus obtained with those of the substances prepared from willow bark; they coincide in every point. Here then we have a very complex organic compound artificially produced by the decomposition of a still more complex substance.

My next step will be to transform, if possible, salicin into populin; I hope to effect this change by submitting it to the action of chloride of benzoyl.



The only difficulty which presents itself as yet, is the action of the hydrochloric acid, which is liberated in this process, on the newly-formed compound.

I need scarcely mention, that in boiling populin with a mixture of sulphuric acid and bichromate of potassa, you obtain a considerable quantity of hydride of salicyl.

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