

SUMMARY.

1. Studies have been made of the effect of temperature and concentration on the distribution of caffeine between water and chloroform.
2. The effect of the presence of other solutes in the aqueous layer on distribution has been determined at 25°.
3. The solubility of caffeine in water and certain aqueous solutions has been measured at 25°.
4. Further proof of the existence of molecular compounds of caffeine with sodium salicylate and sodium benzoate in aqueous solution has been obtained by cryoscopic measurements.
5. The distribution of antipyrine has been determined under similar conditions.
6. The solubility of *p*-acetoxy-acetanilide in water and chloroform has been measured at 25°. Its distribution between water and chloroform has likewise been determined.
7. Comparison of the distribution curves for caffeine and antipyrine between water and chloroform confirms the earlier assumption that the distribution ratios of these substances are nearly if not quite identical.

WASHINGTON, D. C.

HOLLYHOCK ROOT (?) FOR ALTHAEA.

BY OLIVER A. FARWELL.

There has come upon the markets of this country what purports to be althaea or marshmallow root. Superficially it bears a strong resemblance to the official drug and is of about the same size and is covered with loosened bast fibers; it is lighter colored, the longitudinal ridges are not so prominent, the grooves broader and shallower or these entirely absent; the cambium zone is circular while in *Althaea* it is usually angular, but in undoubted *Althaea*, the root often is not grooved and the cambium zone not angled; in testing for lignified tissues, we find that in the official drug the wood groups are separated, very minute and evenly distributed throughout the central cylinder; in the substitute they are less numerous, but larger, the largest forming concentric circles. It is unquestionably the root of some malvaceous plant closely related to *Althaea* and may be that of *Althaea rosea*, the Hollyhock, which is often used in place of *Althaea*.

SOURCE OF BALSAM POPLAR BUDS.

BY OLIVER A. FARWELL.

The present edition of the National Formulary allows this product to be derived from *Populus nigra* Linn or from *Populus balsamifera* Linn, the latter name interpreted as currently but wrongly applied to the northern Balsam Poplar, the proper name for which is *Populus Tacamahacca* Mill. As a question concerning the accuracy of this source arose, I determined, if possible, to verify the botanical source. While on my vacation in August, I collected branches of *P. candicans* with well-developed buds and I have seen commercial samples exactly similar; also I have seen commercial samples that agree in every particular with the buds of *P. Tacamahacca* Mill. A third sort was found upon the market that was much larger and more angled than the above mentioned.