

vitamin A), it is improbable that it is itself the vitamin. Thus treatment with hydrochloric acid, and catalytic hydrogenation, both destroy the visible bands although not reputed to destroy biological activity, while acetic anhydride does not affect the visible absorption although supposed to inactivate the vitamin. The ultra-violet absorption at 2850 to 2400 Å. also frequently persists when the biological activity has presumably been destroyed, and so cannot always be correlated with activity. On the other hand, the ultra-violet absorption between 3200 and 2850 Å. closely follows the biological activity, since both are destroyed by acetic anhydride and irradiation, and both resist the action of hydrochloric acid, hydrogenation and oxidation. It is with this region of the absorption spectrum that the biological activity is most likely to be associated. At liquid air temperature the absorption band in this region shows a structure.

It has long been a puzzle why vitamin E concentrates should retain their activity after such drastic treatment as catalytic hydrogenation. In our experiments, hydrogenation was continued for several hours after the yellow colour of the concentrate had disappeared, but even under these conditions saturation was not complete (iodine value of original concentrate 210; of hydrogenated concentrate 70) while the ultra-violet absorption, although reduced to about half its original intensity, was little changed in appearance. It seems probable, therefore, that the answer may lie in a high resistance of the vitamin E molecule to hydrogenation, rather than to the persistence of activity in the completely hydrogenated molecule.

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¹ Bowden and Moore, *NATURE*, 131, 512, April 8, 1933.

² Morton and Edisbury, *NATURE*, 131, 618, April 29, 1933.

³ Euler, Hellström and Klusmann, *Svensk Kemisk Tidskrift*, 45, 132; 1933.

⁴ Evans and Burr, *Memoirs of the University of California*, 8; 1927.

Monetary Standards

JUDGING by his letter in *NATURE* of July 22, p. 133, Prof. H. E. Armstrong and I do not mean the same thing by the constancy of a monetary standard.

It is easy, and in many ways advantageous, to take a fixed weight (or rather mass) of gold, and call it a pound sterling. If we do that, as Prof. Armstrong has discovered, the pound will always possess the same value *in gold*. But what about other things? As I take it, money should represent a fairly steady standard of purchasing power. A pound should enable us to buy roughly the same amount of wheat, and cloth, and omnibus rides, and theatre tickets. We do not want only gold; indeed, I am not sure that I want any gold at all.

Now in this criterion of constant purchasing power, gold has proved very untrustworthy. Even in the calm years of the nineteenth century, the purchasing power of gold over wholesale commodities rose between 1823 and 1848 by 25 per cent, fell from 1848 until 1873 by 20 per cent, rose by 40 per cent during the great agricultural depression from 1874 until 1896, and then began to sink again as South African gold

slowly made gold cheap—that is, put up prices (“Layton’s History of Prices”, 1922). A rise in prices impoverishes those with fixed incomes; a fall in prices destroys the profits of industry, creates unemployment, and, in the end, would bring the economic machine to a standstill.

During the present more hectic century, the vagaries of gold have been much greater. At the outbreak of War, the gold standard, so often proclaimed as a sure shield against disaster, was, as always in a crisis, suspended as too dangerous. We returned to gold in 1925, thereby lowering prices immediately by some 10 per cent and precipitating the coal strike. Moreover, we thus condemned prices to the downward drag, which, due chiefly to the maldistribution of gold, lasted until we were forced off gold in 1931 (“Statistical Year Book of the League of Nations”). Almost immediately, informally and indirectly, our currency was again linked to gold, and the fall in prices, with its accompanying depression and unemployment, re-established. Just lately, the trade cycle has turned, and it looks as though prices would rise for a time and trade improve.

Now whatever views Prof. Armstrong may hold, personally I do not think that a standard which, in its chief function of measurement, expands and contracts by 25, 20 and 40 per cent in the course of one century and undergoes even more violent changes in the next, is a scientific standard in any useful sense of those words.

Whether the gold standard can be made more constant and workable, or whether we shall have to look elsewhere when things settle down, is not relevant to this letter. Personally, I do not know, and can only wait and watch. Anyhow, I hope that no premature decision will be taken.

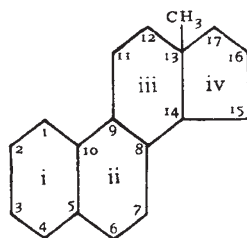
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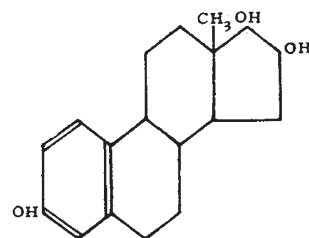
Nomenclature of the Oestrin Group

THE recent work of Butenandt, Marrian, and others on the oestrus-producing hormone, summarised in the Chemical Society’s discussion on March 16th, has consolidated our knowledge of the chemistry of these substances and shown that they are probably closely related to the sterols. It appears opportune to adopt a uniform chemical nomenclature for the derivatives of oestrin, which harmonises with that used for the sterols, and we suggest the following.

The parent saturated hydrocarbon of the oestrin group, C₁₈H₃₀, containing the sterol skeleton with one methyl group but without the side chain, may be termed ‘oestrane’. The numbering should be the same as in Rosenheim and King’s formula for the sterols, that is:



oestrane.



3, 16, 17-trihydroxy 1, 3, 5-estratriene or ‘oestriol’.