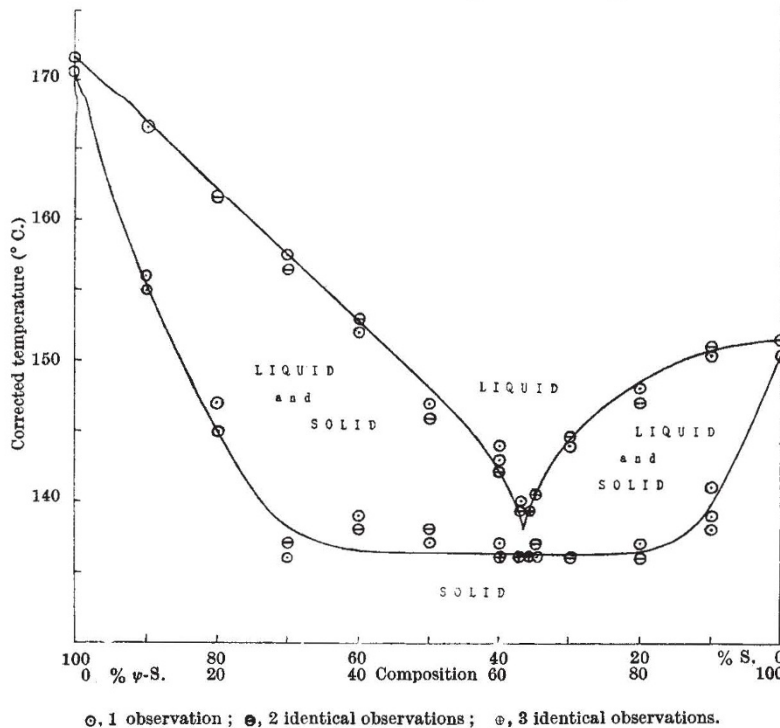


compounds, identified by the numbers (I), (II) and (III), are given in the accompanying table. The method of assay was that in which uteri are dissected, fixed and weighed. Several assays, of which four are recorded, have been made on each sample. The

THE question of the homogeneity of stilbœstrol and pseudostilbœstrol has been studied by us in a preliminary fashion, and we concur in the conclusions of the above communication. So far our purest pseudostilbœstrol has mp. 148°, and is evidently still not quite pure. Its biological activity has not yet been assayed.

E. C. DODDS.
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○, 1 observation; ●, 2 identical observations; ⊙, 3 identical observations.

Corrected Melting Points
Stilbœstrol-ψ-Stilbœstrol Mixtures.

% S	% ψ-S	1	2	3
100	0	170.5-171.5°	—	—
90	10	155-166.5°	156-166.5°	—
80	20	147-161.5°	145-161.5°	-161.5°
70	30	136-156.5°	137-157.5°	137-156.5°
60	40	139-153°	138-152°	138-153°
50	50	137-146°	138-146°	138-147°
40	60	136-144°	136-142° (2)	137-143°
37	63	136-140°	136-139.5°	136-139.5°
36	64	136-139.5°	136-139.5°	136-139.5°
35	65	137-140.5°	137-140.5°	136-140.5°
30	70	136-144°	136-144.5°	-144.5°
20	80	137-147°	136-148°	136-147°
10	90	141-151°	138-150.5°	139-151°
0	100	150.5-151.5°	—	—

figure previously reported by Dodds *et al.* for ψ-stilbœstrol corresponded to approximately one third the activity of stilbœstrol; our figure of one fourteenth is in accord with the findings reported here. The biological inactivity of compound III, stilbœstrol dipropionate, m.p. 78-79°, arouses speculation as to its possible structure.

Further work is in progress on the configuration and activity of these and similar compounds, especially in the light of the results of Wessely *et al.*^{2,3}, and it is hoped to publish a more detailed account later.

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¹ Dodds, Golberg, Lawson and Robinson, *Proc. Roy. Soc.*, **127**, 140 (1939).

² Wessely and Kleedorfer, *Naturwiss.*, **27**, 567-568 (1939).

³ Wessely and Welleba, *Berichte*, **74**, B, 777 (1941).

Loss of Phosphorus during Sewage Purification

THE importance of conserving the world's resources of phosphorus has recently been under discussion. The two main causes of depletion are the loss of phosphates from soil by leaching, and the loss of phosphorus compounds contained in sewage. We have completed a preliminary examination of the removal of phosphorus from sewage during purification and obtained results which may be of general interest.

Sewage and garbage are usually disposed of by different methods and at different sites; and since the quantity of phosphorus retained by the human organism is extremely small as compared with that contained in the diet, the phosphorus in sewage, particularly that contained in the sewage which is derived from a residential area, represents closely the amount of the element actually consumed. Some of the results we have obtained might therefore be of special interest to dietitians.

At the Coleshill sewage works of the Birmingham Drainage Board, which purifies the sewage from about 110,000 inhabitants of a residential district, the total phosphorus in the sewage before purification was equivalent to 1.3 gm. phosphorus per head of population

per 24 hours. The purified sewage which passed to the River Tame contained 54 per cent of the phosphorus present in the crude sewage, the remainder being accounted for by the phosphorus retained by the sewage solids recovered as a sludge. These figures must at present be regarded as tentative, since under war-time conditions it is difficult to assess the population with accuracy.

The Middlesex Main Drainage Works at Mogden serves a population of rather more than 1,200,000. The sewage draining to this works contains a proportion of phosphorus compounds from certain industries, but this proportion is very small as compared with that which is domestic in origin; and moreover, this small proportion can be fairly accurately measured. Over a period of one month the total phosphorus in the crude sewage derived from both industrial and domestic sources was equivalent to 1.56 gm. phosphorus per head per 24 hours, of which, it has been estimated, 1.51 gm. represents the amount consumed in the diet. The purified effluent discharged to the