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THE ASSOCIATED ETHYL COMPANY LIMITED

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OUR REF. HT/MB.

YOUR REF.

27th March, 1940.

Dr. R.A. Kehoe,
Dept. of Physiology,
College of Medicine,
University of Cincinnati,
Cincinnati,
Ohio,
U.S.A.

Dear Dr. Kehoe,

I am sending you herewith a report of Professor Dodds
which Mr. Bevan intended to bring over with him to the States but which
was, unfortunately, overlooked.

Yours sincerely,


H. FOSSETT.

Copy to Mr. Bevan, New York.

Copy by Air Mail.

BRIEF STATEMENT OF THE PRESENT POSITION OF THE WORK
ON LEAD METABOLISM AND EXCRETION

During the year 1939 the general survey work on lead excretion in various groups of individuals in this country has been continued. A large amount of data has been accumulated on the technique of estimation, and the new methods learnt by Mr. Smith on his visit to Dr. Kehoe in 1938 have now been installed in this Institute, and are working very smoothly. By the adoption of these methods it has been possible to treble our weekly number of analyses.

Lead and Calcium Metabolism Experiments

In addition to the lead survey work a large number of lead balance experiments have been done in connection with the work on calcium balance on patients in the Courtauld Research Wards. (The commencement of this work was shown to Dr. Kehoe on his last visit to this Institute.)

We have been able to work out very accurate lead intake and lead output over periods of from 1 to 6 weeks, and to contrast these results with calcium intake and output. This has been done in normal subjects and in subjects with thyrotoxicosis. Very interesting results have been obtained which differ in a number of respects from those published by Aub and his co-workers.

Works Control Experiments.

A large number of specimens from the works of the I. G. Farbenindustrie in Leuna have been studied. Up to the outbreak of war they sent samples to us in order to complete the series of parallel experiments made in this department, the laboratories of the I. G. Farbenindustrie and the University laboratories in Halle and in Goettingen.

Unfortunately the outbreak of war has interrupted these experiments, and it is doubtful whether we shall be able to obtain the comparative figures. I have, however, a number of these which will be reported to Dr. Kehoe in due course.

A number of specimens have also been received from the French works of Messrs. Kuhlmann and we have supplied them with test specimens for duplicate analyses.

Imperial Chemical Industries Plant

During the year a number of meetings have been held with the Imperial Chemical Industries. It was eventually decided that the control work should be conducted in this department, but that one of the chemists of the Imperial Chemical Industries should be trained so that in the event of our destruction by bombing the work would only be interrupted for a short period. Accordingly a chemist from the Imperial Chemical Industries has now been trained in this department, and is competent to undertake the analyses should it no longer be possible to do them here.

It has been arranged that samples from the men who are to operate the plant will be sent to this Institute, where the analyses will be performed. We have conducted a series of experiments on the preliminary preparation of the samples from Northwich, so that their transport will be facilitated. At the present time I am concluding a series of experiments in which the specimens are dried in Northwich and transported for final analysis to this Institute.

Experiments at the Blending Plants

Since the outbreak of war the inspection of men at the blending plants has been conducted by my colleague Dr. J. D. Robertson. I have used this opportunity to bring into line the examinations of the men at the blending plants with the work we are doing on the general lead survey, and what we propose to do with the men at the Imperial Chemical Industries plant. I am drawing numbers of specimens from the men at the blending plants, and will be able to produce a series of lead excretions of these persons to contrast with that obtained from the general survey and from those at the Imperial Chemical Industries plant.

I have had a number of meetings with Dr. Cassells, the newly appointed medical inspector of the Imperial Chemical Industries plant, and he has agreed that the clinical investigations performed shall be of the same type as those conducted here on subjects in the general lead survey and by Dr. Robertson on the men working in the blending plants. By this means it will be possible to co-ordinate the whole of the work and to obtain in the future a very interesting number of parallel investigations in these various branches of workers engaged in the petrol industry.

(Signed) E. C. Dodds

23.2.40