of Mexico and the Institute of Inter-American Affairs, built and equipped the building.

A committee appointed by the Board of Scientific and Industrial Research, New Delhi, will undertake a systematic examination of the radioactive contents of minerals occurring in the different rock systems of India. This study is expected to be of help in understanding the chronological order of the great undated rock systems of the Deccan and the general geological layout of the Indian subcontinent. The knowledge thus gained will help mineralogists and prospectors in locating minerals and oils of economic value.

In the Laboratory

Assay of *p*-aminobenzoic Acid

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At the time Dr. J. C. Lewis published his microbiological assay method for *p*-aminobenzoic acid (*3*), we had developed a similar assay using a different organism.[1] Since Lewis' method seemed admirable in all respects, and ours offered no unique advantage, our results were not published. In a recent private communication, however, Lewis stated that the organism used in his test, *Lactobacillus arabinosus* 17–5, could be trained to give relatively stable *p*-aminobenzoic acid nonrequiring lines by subculturing in the presence of suboptimal levels of *p*-aminobenzoic acid. He also reported that recently his stock culture gained the ability to dispense with *p*-aminobenzoic acid after maintaining a stable requirement for at least three years. The factors responsible for such changes have not been elucidated. In view of this and since other available methods (*1, 2, 4*) suffer either in convenience or sensitivity, it appears worth while to record that another organism, *Leuconostoc mesenterioides* Pd–60, is suitable for *p*-aminobenzoic acid assay.

In general, the basal medium and technique of Lewis' assay can be used with *Leuc. mesenterioides,* with the following differences noted. The assay tubes should be incubated at 37° C. for 15 hours. One-tenth millimicrogram of *p*-aminobenzoic acid per milliliter of medium gives maximum growth. The extent of growth must be determined turbidimetrically (*5*), since the organism does not produce large amounts of lactic acid. Samples of various natural products assayed with both organisms give comparable results. Representative values are given in Table 1.

[1] This work was done by the author while holding a postdoctorate fellowship from Swift and Company in the laboratory of Prof. Roger J. Williams, at the Biochemical Institute, University of Texas, in 1942. The author wishes to acknowledge the assistance of Miss Adele Neely in carrying out the assays.

The samples assayed were prepared by autoclaving 1-gram samples of the substance with 5 ml. of six normal sulfuric acids at 15 pounds pressure for 15 minutes. The samples were then neutralized with barium hydroxide, diluted to an appropriate volume, and filtered. Very little destruction of pure *p*-aminobenzoic acid was caused by this procedure, and maximum values were obtained in tissue extracts. Hot-water extraction or enzyme hydrolysis made available only a fraction of the total vitamin in the samples. Contrary to the findings of Lampen and Peterson (*1*), alkaline hydrolysis caused almost total destruction of the activity of tissue extracts, although the pure vitamin itself was not appreciably affected by that treatment. Tissue extracts were found to deteriorate rapidly on standing, even when kept frozen, and were therefore assayed on the day prepared.

TABLE 1

Sample	*Leuconostoc mesenterioides*	*Lactobacillus arabinosis*
	micrograms per gram	micrograms per gram
Yeast	4.9	5.5
Wheat germ	1.7	1.7
Whole wheat	0.49	0.63
Egg	0.31	0.25
Banana	0.46	0.43
Peanuts, raw	1.6	1.7
Spinach	1.0	1.3
Beef liver	1.5	1.1
Beef muscle	0.04	0.05
Pork chop	0.34	0.26
Blood, human	0.03	0.04
Milk	0.05	0.03
Carrots	0.2	0.1
Potato, Irish	0.4	0.5
Sweet potato	0.09	0.06

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