

tion are less expensive. The so-called mantel cover, an inverted tube over the filter candle, enables all but the last traces of liquid to be filtered; this device was introduced years ago by M. P. Ravenel. Cylinders of both types, delivery tubes and mantle covers are stocked by Arthur H. Thomas Company of Philadelphia.

¹ Kramer, S. P., *Science, N. S.*, 1927, lxxv, 45; *J. Infect. Dis.*, 1927, xl, 343.

² Mudd, S., in T. M. River's, *Filterable Viruses*, in press.

³ Cf. Krock, F. H., and Holman, W. L., *J. Am. Med. Assn.*, 1923, lxxx, 1142.

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Vitamins A and B in the Chinese Litchi Nut.

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The Chinese hazel or litchi nut (*Litchi Chinensis*) has long been cultivated for medicinal and edible purposes in the Orient, and has attained a certain vogue in this country. A study of the therapeutic and food values of this fruit was made by Read, who describes the nut as "nearly globose with a dull brick-red pericarp which, when ruptured, exposes a sweet, brown, fleshy arillus surrounding a glossy chestnut-brown obicular seed"¹ If this fleshy edible part corresponds in nutritive value to most of the fruits used in the American dietary, it should constitute a source of certain of the accessory food factors. The present study deals with the assay for vitamins A and B in the litchi nut.

Young rats 25 to 30 days old, weighing 40 to 50 grams, were given the following diets:

<i>Lacking vitamin A</i>		<i>Lacking vitamin B</i>	
Extracted casein	18%	Extracted meat residue	18%
Raw corn starch	50	Raw corn starch	50
Crisco	28	Crisco	23
Salt mixture ²	4	Cod liver oil	5
Dried yeast 200 to 400 milligrams daily		Salt mixture ²	4

The growth of rats on the first ration was rather prolonged, lasting from 40 to 50 days before cessation. The diet was then irradiated with light from a quartz mercury vapor lamp, with the result that growth was immediately resumed for 10 to 14 days more. At that time definite ophthalmia had developed in all the animals,

and the edible part of the litchi nut was given in doses of 1 and 2 grams daily (0.87 to 1.74 grams dry matter).* The material was not always eaten completely, and the food consumption was irregular during this period. In no case was the ophthalmia cured, nor did the body weight increase. When 6 to 10 drops of cod liver oil were given with 2 grams of litchi nut, growth was secured, and the ophthalmia disappeared in 5 to 8 days.

In the test for vitamin B, the rats, after consuming the basal ration for approximately 2 weeks, ceased growing, and litchi nut was given in doses of 1 and 2 grams daily. There was not the slightest effect in checking the loss of weight, although the material was well consumed. In view of the usual prompt though temporary response of rats to even traces of vitamin B under these conditions, the observed behavior of the experimental animals in the present tests indicates that the litchi nut contains little, if any, vitamin B. When 200 milligrams of dried yeast were given with 2 grams of litchi nut, growth at the normal rate was resumed.

It is thus apparent that, while the fruit contains ineffective quantities of vitamins A and B, it is not toxic as has been stated in the Chinese Materia Medica (See also Read¹). On the other hand, the dried litchi nut as obtained on the American market and as used in these experiments, constitutes an exception among edible fruits in its lack of the two food factors, especially vitamin B.

* The edible portion showed 12.6% loss in weight when heated for 120 hours, at 60° C., in a vacuum oven.

¹ Read, B. E., *J. Am. Chem. Soc.*, 1918, xl, 817.

² Osborne, T. B., and Mendel, L. B., *J. Biol. Chem.*, 1918, xxxvii, 557.

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Variations in Auriculoventricular Conduction Time in Rheumatic Carditis with Salicylate Therapy.

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It is now generally believed that the drugs employed in the treatment of acute rheumatic fever (sodium salicylate, acetylsalicylic acid and neocincophen) probably exert an antisymptomatic rather than a specific action in this disease. Following their administration, the pain and exudation of arthritis are usually controlled, high