pure blood fibrinogen. A control mixture, using purified prothrombin from fresh blood plasma instead of platelet solution, gave very active thrombin, and clotted fibrinogen in 10 seconds. The platelet solution was capable of replacing cephalin in the activation of the prothrombin solution. This property was unaffected by boiling. It would also directly clot pure blood fibrinogen when free calcium was present, just as well as would an active tissue fibrinogen solution. This action was lost on boiling.

Platelets, therefore, do not contain thrombin or prothrombin, but do contain free cephalin and tissue fibrinogen, and are thus similar to other body tissues.

This is a preliminary report.

3529

Poisoning by Sikimitoxin.

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Chinese Bastard Anise, Mang T'sao, commonly known under the colloquial name T'zu Ta Liao, and identified as the fruit of *Illicum religiosum, Sieb.*, has long been known to be poisonous. It is chiefly used as a condiment in preparing Chinese meat dishes. Fatal poisoning by these seeds is not an uncommon occurrence.[1] The chemical nature of its toxic principle was first investigated by Eykman[2] who, working with the Japanese anise, or sikimi-no-ki, also identified as *Illicum religiosum, Sieb.*, isolated from the seeds a crystalline body which he named "Sikimin" and claimed for it a powerful toxic action. 12.5 mgm. of Sikimin killed a young dog in 3 hours. This crystalline body or sikimin, has never since been isolated by other workers; crude seeds, or aqueous extracts, being generally employed for the physiological study of this poisonous plant.[3, 4, 5]

In a recent chemical study of Mang T'sao, the writer isolated from the seeds an amorphous poisonous principle with definite chemical and physical characters. Given to cats, 0.2 mgm. of this amorphous substance per kilogram of body weight was found to be fatal, less than 0.1 mgm. of substance per kilogram of body weight was sufficient to produce the same poisoning symptoms as those produced by the crude seeds, *i. e.*, salivation, vomiting defecation,

convulsion and death. The name *"Sikimitoxin"* is suggested for the new toxic principle to distinguish it from Eykman's Sikimin. from which it differs in its physical and chemical properties, and also in its much higher toxicity.

Properties of Sikimitoxin. It is a feebly acid nitrogen-free body and occurs as a white amorphous powder without definite melting point. When slowly heated, it sinters at 63° C., then gradually increases its volume as the temperature rises, and finally becomes a clear liquid at 135° C. It is easily soluble in cold water, chloroform and alcohol, less so in ether and benzene and insoluble in petroleum ether. When brought into contact with a small quantity of cold water, it becomes at once an oil and then gradually dissolves. Its toxicity is rapidly destroyed by the action of caustic alkalies, and greatly decreased by the prolonged action of boiling water with or without the presence of hydrochloric acid.

It is questionable whether Eykman's sikimin was the original substance present in the seeds, or the resulting product formed by the prolonged action of acetic and hydrochloric acid used in his process of isolation, as Sikimitoxin was found to be sensible towards the action of these chemical reagents.

Details concerning the process of isolation, properties and the toxicity of Sikimitoxin will appear later.

This is a preliminary report.

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[1] Read, B. E., *China Med. J.*, 1922, xxxvi, 303.

[2] Eykman, J. F., *Pharm. J.*, 1880-1881, xi, 1046.

[3] Read, B. E., and Kiang, P. C., *Chinese J. Physiol.*, 1927, i, 15-22.

[4] Guerrero, L. E., *Philippine J. Sci.*, 1916, ii, Sec. B., 203-13.

[5] Chen, K. K., *J. A. Ph. A.*, 1926, xv, 861.

3530

Presence of Type Specific Pneumococco-opsonins in Sera of Animals Naturally Resistant to Pneumococcus Infection.

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In a previous communication, Robertson and Sia[1] found that the sera of animals, such as cat, dog, sheep and pig, that are naturally resistant to pneumococcus infection, contained normal opsonins for the pneumococcus, whereas the sera of susceptible animals did not