

to the method of Hassid and McCready² using a Klett-Summerson Photoelectric Colorimeter with the red K₆₆ filter. Sweet potato starch was used for preparing the amylose samples.

Similar results were obtained with amylose samples prepared from potato and corn starches.

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1. Haworth, Peat and Sagrott, *Nature*, 1947, 157, 19.
2. McCready and Hassid., *Jour. Am. Chem. Soc.*, 1943, 65, 1154.

"VARAGU", PASUPALUM SCROBICULATUM (LINN.)

THE millet known as "Varagu" (Tamil), Kodra (Hindi), Pasupalum Scrobiculatum (Linn.) is extensively used as a staple food by poorer classes in all parts of India. In 1946, when rice was rationed, the Government of Madras compulsorily required part of the rice to be replaced by varagu by those who were accustomed to use millets as food. Various complaints were received that some varieties of Varagu consumed were producing poisonous symptoms. On the recommendation of one of us (K. V. S.) a Committee consisting of the Surgeon-General, Director of Public Health, Director, King Institute, the Govt. Analyst, and the Millet Specialist was constituted and they recommended that Government should undertake, through the Government Analyst, an investigation of Varagu Poisoning.

Some samples were found to be toxic to dogs. Stas Otto method was negative showing that the poison was not an alkaloid. But as a number of samples were found to be undoubtedly poisonous to dogs a systematic investigation was attempted. It was found that the fat residue obtained from extracts with petroleum ether (B.P. 60-95°C.) or chloroform was definitely toxic. The fat gave the following figures: (average)

Melting point 42°C.
Refractive Index (60°C.) 1.1650
Iodine Value 93.6
Saponification Value 107.7

of the fat contained in 50 grams of the millet 1.5 grams when fed to dogs, developed tremours within two hours. The dogs soon lost their power of movement and died within 24 hours. Attempts to feed monkeys with the fat failed as they refused to take the food. Subsequently we found that when the fat was injected subcutaneously into dogs the symptoms described above were observed. We were able to reproduce the symptoms in monkeys by intramuscular injection. Crows were found to be extremely susceptible to both oral ingestion and intramuscular injection. After ten minutes of taking the food they vomit the food, the pupils become fixed, they droop their heads, soon lose power of moving and are dead in 24 hours. The fat is stable to heat but the toxin in the fat seems to be easily destroyed on heating with dilute alkali and acid. It could not be an alkaloid as it is not taken up in acid solution or a glucoside as it is not taken up by water or 90% alcohol. The poison seems to be adsorbed chromatographically on silica column and further experiments are in progress.

These facts seem not to have been recorded in literature so far as we are aware, viz., of a fat derived from a millet having been found to contain a substance which is poisonous to man and animals. Our findings of the effects by intramuscular injection on dogs, monkeys and especially on crows should provide a new method of approach for studying the presence of poisonous elements in fats and of estimating the lethal doses.

A simple colour test based on the reaction of concentrated sulphuric acid on the fat is being worked out to distinguish the poisonous variety of Varagu from the non-poisonous variety of Varagu.

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DIRECTOR-GENERAL OF UNESCO

DR. JAIME TORRES BODET, Foreign Minister of Mexico, has been elected the new Director-General of the United Nations Educational, Scientific and Cultural Organisation.

Dr. Bodet, born in Mexico on 17 April 1902, received his education in that country. An eminent author, and former Minister of Education in Mexico, he has written three volumes of poetry, six novels, and many books on education. For his outstanding work in the educational field, the University of Mexico and the University of Southern California conferred on him the honorary title of Doctor in Letters. He is also an active member of the Mexican Academy of Languages. While with the Ministry of Education, Dr. Bodet organised a system of public libraries throughout Mexico, and assisted in the translation of the classics which were published by the Mexican Government. He was Professor of French Literature

in the Department of Philosophy and Letters in Mexico from 1924 to 1928.

He entered the Foreign Service in 1929 and held diplomatic positions in Spain, Holland, Belgium and France.

In 1943 he was appointed Minister of Education, at which time he initiated the world famous Mexican campaign against illiteracy. In November 1945 he headed the Mexican delegation to London and attended the Conference which created Unesco. He was one of the original signers of the Unesco Charter.

He has been Foreign Minister of Mexico since December 1946, and in that capacity led the Mexican delegation to the Inter-American Conference for the Maintenance of Peace. He was also head of the Mexican delegation to the Second General Assembly of the United Nations, where he was elected Vice-President.

Dr. Bodet will assume his duties as Director-General of Unesco in Paris at the beginning of 1949.