are accompanied by excessive oxidizing or reducing processes, or those in which the temperature or hydrogen-ion levels are not compatible with the preservation of specific properties residing in the serum proteins encouraging results have been secured. Therapeutic sera derived from horses treated under these conditions retained considerable portion of therapeutic value, and yet they did not cause anaphylaxis when injected into guinea pigs sensitized to native horse serum. Thus far only two mutually heterologous couplings have been secured but the experiments are being continued in the search for further and simpler procedures in order to secure sufficient variety of coupled sera so that 3, 4 and more reinjections of therapeutic sera may be made without the danger of shock. At the same time the couplings already secured are being tested for the toxicity when injected into animals in large amounts.

4940

Some Chemical and Physical Properties of the Crystalline Follicular Ovarian Hormone: Theelin.

SIDNEY A. THAYER, CLEMENT D. VELER AND EDWARD A. DOISY.

From the Laboratory of Biological Chemistry, St. Louis University School of Medicine.

The quantity of the earlier preparations of the crystalline hormone was insufficient for much chemical work. Three samples which were carefully assayed showed a potency exceeding 3000 rat units per milligram. The melting point of the crystals of preparations No. 119 and No. 143 was 243°C. (uncor.).

When larger quantities of the crystals became available an investigation of the chemical and physical properties of the compound was begun. The data given in Table I were obtained by micro methods which had been studied with known compounds.

The melting point was taken by the open beaker method. The corrected temperature is approximately 6° higher. The molecular weight determined by the Rast micro method gives values which agree with the values calculated from the Iodine number upon the assumption that there is one double bond in the molecule. The Iodine number was determined at 0°C. in the dark by a micro modification of the Hanus method. The hormone was acetylated with acetic anhydride in pyridine and the weight obtained indicated two hydroxyls. The molecular weight of the recrystallized derivative

TABLE I.

Preparation No.	Melt. Point (Uncor.)	Molecular Weight		Iodine No.	Hydroxyl		
		Rast	From I. No.		No.	Diacetyl Derivative	
						Mol. Wt.	Melt. Point
F153	243°	277,284,295	273	92.9	2	359	122°
F156	243.2°	268,269	264	96.1	2	353	122°
A160	243.5°	272,276	*	*	*	*	*
164	243.5°	267,268,270	262	96.7	*	*	*
Average		274.6	266				

* Not run on this sample.

confirmed this. The esterification of 2 alcoholic radicals would increase the molecular weight by 84 gm. which, added to the average value obtained by the Rast method ($274 + 84 = 358$), gives a value close to those experimentally determined.

The crystals were analyzed for C and H by Pregl's micro combustion method. Average, C 79.69%; H 8.49%; O 11.82%. These data give an empirical formula of $C_{18}H_{23}O_2$ with a molecular weight of 271, which corresponds with the data of the table.

4941

The Use of Plasma in the Kline Test for Syphilis.

K. L. BURDON AND L. BROMBERG. (Introduced by J. Bronfenbrenner.)

From the Department of Bacteriology and Immunology and the Department of Internal Medicine, Washington University Medical School, St. Louis, Mo.

Among the several successful precipitation methods for the diagnosis of syphilis recently developed the Kline microscopic slide test has been found to be one of the most satisfactory. Though more sensitive than other tests it is nevertheless highly specific.

Considerable time is usually expended in the collection and separation of the patient's serum, even though the performance of the test itself may be accomplished within 5 minutes. At the suggestion of Dr. Bronfenbrenner, the use of plasma, rather than serum, has been tried as a means of shortening the time that must elapse between the taking of a blood sample and the completion of a test. Since plasma can be collected much more rapidly and easily than serum, its use offers the possibility of making a presumptive diagnosis in a few moments after taking of the blood, while the patient waits in the clinic or office.