mary of the effects of different agents upon the thrombocytes (platelets) in pigeons.

For differentiation, the modified Nocht stain described by Hastings[1] was used and for counting, a modification of the cresyl violet stain of Buckman and Hallisey.[2] All agents were injected intravenously at body temperature into the wing veins and blood was obtained from superficial veins of the legs.

The following agents, which cause anaphylactoid symptoms in guinea pigs, pulmonary emboli and thrombi, and hemagglutination *in vitro*, produced increases in number and clumping of thrombocytes in pigeons; peptone, agar-sol gel, toxified agar, Congo red, collargol, charcoal, kaolin, colloidal iron, colloidal arsenic, 50 per. cent. acetic acid and 6 per cent. acacia. Histamin, tannin and arsphenamin (in small dosage) produced doubtful or no changes in the thrombocytes, but sections of lungs and livers showed marked clumping of erythrocytes from these agents.

Histological examinations of the lungs, liver, spleen and kidneys of all animals showed congestion and thrombosis after the majority of the agents that were injected. In a few cases marked hemorrhages were found. The majority of these agents caused definite symptoms, ranging from shivering, crouching, and increase in respiration to death.

On the other hand, the withdrawal of blood alone, and the injection of 0.85 per cent. sodium chloride (as control) produced no symptoms and no demonstrable changes in the thrombocytes; and histologically, the changes were slight or absent.

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The inorganic constituents of human saliva.

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There is a growing opinion that many of the pathological conditions of the oral cavity (caries, pyorrhea, etc.) are the result of faulty diets. The acceptance of this assumption makes it nec-

[1] Johns Hopkins Hospital Bull., 1904, 122.

[2] *J. Am. Med. Assoc.*, 1921, lxxvi, 427.

essary to know the normal constituents of the saliva. During the last year several investigators have reported on one or more of the salivary constituents but a complete correlation between the dietary and salivary constituents is lacking. The work presented here is very incomplete and represents only one phase of a complete survey of the mineral metabolism being made on a number of adult human subjects.

The results thus far, given in a brief form in the following table, have been obtained from weekly analysis of saliva samples from six healthy adults, all of whom have been on a fixed diet for a periods of eight weeks.

SUBJECTS

	2	3	4	5	6	7
	Total Solids—grams per 100 c.c.					
Min.	0.464	0.483	0.645	0.527	0.434	0.730
Max.	1.040	0.727	1.370	0.650	0.640	1.308
Avg.	0.752	0.576	0.865	0.585	0.537	0.923
	Ash—grams per 100 c.c.					
Min.	0.176	0.127	0.175	0.148	0.123	0.194
Max.	0.274	0.220	0.371	0.250	0.220	0.292
Avg.	0.236	0.193	0.257	0.201	0.189	0.239
	Cl—milligrams per 100 c.c.					
Min.	35.0	40.0	50.0	60.0	30.0	40.0
Max.	70.0	75.0	80.0	70.0	60.0	110.0
Avg.	53.0	58.0	66.0	62.0	40.0	66.0
	P*—milligrams per 100 c.c.					
Min.	4.0	4.5	4.1	4.1	7.9	11.1
Max.	14.2	10.0	18.2	12.7	21.0	19.4
Avg.	11.2	8.4	12.8	9.4	12.6	15.3
	N as NH_3—milligrams per 100 c.c.					
Min.	8.6	4.2	7.2	5.6	4.8	8.3
Max.	15.0	8.6	9.5	18.1	10.9	22.0
Avg.	10.6	6.0	8.2	11.5	8.9	14.8
	Total N—milligrams per 100 c.c.					
Min.	54.2	44.4	60.0	45.2	51.0	82.7
Max.	69.1	74.1	72.5	70.0	56.9	99.0
Avg.	63.9	56.8	68.8	57.6	52.4	90.0
	CO_2—bound as bicarbonate—c.c. per 100 c.c.					
Min.	8.7	8.7	4.9	3.0	13.4	10.6
Max.	23.9	14.3	26.7	9.6	17.2	15.3
Avg.	14.5	11.0	10.3	5.9	15.2	13.0
	Ca—milligrams per 100 c.c.					
Avg.	6.9	.....	5.6	.....	5.3	.....

* Acid soluble.

Further work is in progress.