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## Some Observations on the Effect of Iodine Administration upon Sheep

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chloride. This process seeks to utilize the bicarbonate by treating it with chlorine to form sodium chlorate.

The reaction between chlorine and sodium bi-carbonate at the proper temperature forms sodium chlorate and sodium chloride. The chlorate is recovered from the liquor by virtue of the difference in solubility between sodium chlorate and sodium chloride in the hot and cold. The salt and carbon dioxide are again used in the soda process.

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## SOME OBSERVATIONS ON THE EFFECT OF IODINE ADMINISTRATION UPON SHEEP

JOHN M. EVVARD, ALVIN R. LAMB, AND W. G. GAESSLER

On account of the occasional incidence of goitre and death of lambs produced on the experiment station farm, an experiment on the administration of potassium iodide to the pregnant ewes was carried on in 1917-18. Three lots of four on the same ration were fed from 2 to 15 grains potassium iodide daily. Results on the prevention of goitre in the young were not conclusive, but the passage of the iodine into the milk of the ewes was demonstrated, and pronounced unfavorable results from too large a dose of iodine were obtained, especially in the lots receiving the larger allowances. These unfavorable effects were not particularly in the vigor of the new-born and the lack of resistance to disease.

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## STRUCTURAL EVIDENCES OF AN IRON-CARBON EUTECTOID

H. E. FLANDERS AND ANSON HAYES

Photographic evidence is presented which shows that there is produced in the critical range a large number of small carbon spots throughout the ferrite matrix. Since the spots are not present above the range or in pearlite or solid solution areas they are considered to be the result of the precipitation of carbon and ferrite at the iron-carbon eutectoid. The details of the mechanism of  $\text{CO} \times \text{CO}_2$  acting as catalysts to break down cementite is presented from the standpoint of cementite being metastable. When this is the case a pressure gradient will exist for CO from the cementite toward the temper carbon and a similar gradient will exist for  $\text{CO}_2$  in the opposite direction. It is concluded that the gases do not transport carbon from cementite to the primary temper carbon spots under ordinary conditions of graphitization.