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## Some Reactions in Liquid Sulfur Dioxide

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of mercuric chloride Bettendorff's test will detect a smaller quantity of arsenic than Gutzeit's test or Marsh's test. The rate of formation of the colloidal arsenic is a function of the concentration of mercuric chloride. Because of this unknown, concentrations of mercuric chloride as small as 0.00000002 M. may be determined by comparing the rate of appearance of color in the unknown solutions with the rate of appearance in the presence of known concentrations of mercuric chloride.

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### THE SALT EFFECT OF CERTAIN INDICATORS IN SLIGHTLY BUFFERED SOLUTIONS

JOHN A. DUDYCHA AND BEN H. PETERSON

The change in the colorimetric pH with changes in salt concentration is determined with reference to the quinhydrone electrode. The salts used caused a more alkaline reading with the quinhydrone electrode and a more acid reading with the colorimetric method. The effect is much more pronounced in the lower concentrations. The "colorimetric pH" does not change appreciably in concentrations from about 1 molar to saturation.

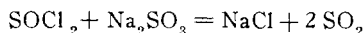
COE COLLEGE,  
CEDAR RAPIDS, IOWA.

### SOME REACTIONS IN LIQUID SULFUR DIOXIDE

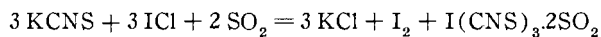
JACOB CORNOG AND VERNON A. LAMB

Experiments by the authors support the following observations.

1. Reactions in liquid sulfur dioxide are usually solvolytic in the sense that the solvent participates in the reactions.
2. Liquid sulfur dioxide under atmospheric pressure does not appreciably react with chlorine save in the presence of a catalyst.
3. Thionyl chloride and sodium sulfite do not react as indicated in the following equation.



4. Iodine monochloride and potassium thiocyanate react to form the products indicated in the following equation.



The iodine-thiocyanate-sulfur dioxide substance is a new compound.

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