

PREPARATION AND INFRARED SPECTRUM OF TRANS-1,4-(diisothiuronium dihydrobromide)-2-BUTENE¹

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A mixture of 2.14 g. (0.01 mole) of trans-1,4-dibromo-2-butene, 1.52 g. (0.02 mole) of thiourea, and 50 ml. of absolute ethanol was refluxed 6 hours and allowed to cool to room temperature. The white product which formed was separated by filtration and washed well with dry ether, m. p. 216-218° C. (with decomp.). The yield was 3.14 g. (85.4%).

Anal. calcd. for $C_6H_{14}Br_2N_4S_2$: Br, 43.65. Found: Br, 43.19

The infrared spectrum of this salt appears to confirm the proposed structure. In the high frequency region were found several bands due to N-H stretching vibrations. Amine hydrohalide frequencies were found in the region from 2400-2600 cm^{-1} while a strong band at 1635 cm^{-1} indicated the presence of the C=N linkage. A weak band, appearing at 1650 cm^{-1} as a shoulder on the 1635 cm^{-1} band, was undoubtedly due to the C=C bond stretching vibration. A medium strength band, appearing at 1430 cm^{-1} and of unknown origin, was found in the spectrum of S-methyl isothiuronium hydriodide. The band at 1430 cm^{-1} quite likely was due to the C-H bending vibrations on the carbon adjacent to the sulfur.

This compound is of interest for possible anti-cancer activity and reduction of hypertension.

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Dr. J. Orvin Mundt of the U-T Bacteriology Department has been awarded a \$5,500 National Science Foundation grant to continue studies on streptococci. Recent studies by Dr. Mundt have shown that the Group D streptococci do not necessarily indicate pollution of food, and future studies will deal with the distribution of these organisms under natural conditions.

Dr. Roland H. Alden, chief of the Division of Anatomy at the University of Tennessee Medical Units in Memphis since 1949, has been named to the newly created position of associate dean of the graduate school for medical sciences. Dr. Alden began his new duties January 1, retaining his position as chief of the division of anatomy. Dr. Alden will be taking over a portion of the duties performed by Dr. T. P. Nash, Jr., dean of the School of Biological Sciences. Dr. Nash will continue in his position as dean of the School of Biological Sciences.

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