

## **Participation of propargyl moiety in Butler's cyclopolymerization process**

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### **ABSTRACT**

In order to investigate the possible participation of propargyl group in Butler's cyclopolymn. process, a no. of quaternary ammonium chlorides contg. allyl and propargyl units are prepd. in excellent yields. While the monomer contg. two propargyl units as the only unsatd. groups did not undergo cyclopolymn. or cyclocopolymn. with sulfur dioxide, the monomer having one allyl and one propargyl groups afforded water-sol. homo- and co-polymers. The monomer diallylmethylpropargylammonium chloride gave cross-linked homopolymers, whereas its copolymer with sulfur dioxide was found to be linear and water-sol. Careful anal. of the  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra revealed for the first time the participation of the propargyl units in Butler's cyclopolymn. process to yield polymers having five-membered cyclic structure embedded in the polymer chain.