The first triorganosulfonium azides \([\text{Me}_3\text{S}]\text{N}_3\) and \([\text{Ph}_3\text{S}]\text{N}_3\) were prepared by reaction of the corresponding sulfonium bromides/iodides with silver azide and characterized by spectroscopic methods. The molecular structure of \([\text{Ph}_3\text{S}]\text{N}_3\) as well as that of the precursor, \([\text{Ph}_3\text{S}]\text{Br}\), have been determined by X-ray diffraction.

**Key words:** Sulfonium Azides, Chalcogen Azides, X-Ray Crystallography