

The investigation of magnetic susceptibility of compound a-Tb₃Sn₇

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The title compound crystallizes in own structure type (sp. group Cmmm, a=4.3633Å, b=4.4378 Å, c=26.336 Å) and has split position, consisting of three Sn atoms. This, together with presence of magnetic rare-earth metal stimulated us to study a-Tb₃Sn₇. The alloy, synthesised by arc melting and annealed at 700 C, had a-Tb₃Sn₇ as main phase and traces of Tb₂O₃ and Sn. DC magnetization measurements were carried out on SQUID magnetometer at T=2-350 K and fields up to 5.5 T. The compound is Curie-Weiss paramagnet at T>50 K with magnetic moment per Tb atom 9.56 μB, close to value for ion Tb (3+).