Rigidity of Formal Characters of Lie algebras of type $A$

For a complex simple Lie algebra of type $A$, given a family of elements $f_{\lambda} \in \mathbb{Z}[\Lambda]$, $\lambda \in \Lambda^+$, we show that $f_{\lambda}$ is just the formal character of the Weyl module $V(\lambda)$ if $f_{\lambda}$ satisfies two natural conditions.

**Keywords**: Formal characters, tensor product, Weyl modules.

**MSC**: 17B10, 20G05