On a Decomposition of Normalized Units in Abelian Group Algebras

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Abstract - Let G be an arbitrary abelian group and R a commutative ring with identity of prime characteristic p. For the normalized unit group $V(RG)$ in the group ring RG with p-component of torsion $S(RG)$ we exclusively find a necessary and sufficient condition only in terms of R and G when the equality $V(RG) = GS(RG)$ holds fulfilled. We thus generalize a recent result of ours in (An. Univ. Bucuresti - Math., 2005) as well as a paper by Mollov - Nachev (Compt. rend. Acad. bulg. Sci., 2006).

Key words and phrases : trivial normed units, group rings, indecomposable rings, idempotents, nilpotents, p-components.

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