Journal of Convex Analysis 21 (2014) 663–680

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Order Asymptotically Isometric Copies of c_o in the Subspaces of Order Continuous Elements in Orlicz Spaces

Necessary and sufficient conditions in order that the subspace of order continuous elements of Orlicz sequence space contain an order asymptotically isometric copy of c_0 are given for both, the Luxemburg and the Amemiya-Orlicz norm. In case of a non-atomic, complete and $\sigma-$finite measure space (T, Σ, μ) and the Luxemburg norm (the Amemiya-Orlicz norm) such criteria are obtained under the additional assumption that the space $L^{\Phi}(T, \Sigma, \mu)$ is a dual space (resp. the space $L_A^{\Phi}(T, \Sigma, \mu)$ is a dual and non-square space). In both cases, the Luxemburg and the Amemiya-Orlicz norm the criteria are given under the necessary assumption that the spaces $E^{\Phi}(T, \Sigma, \mu)$ and $E_A^{\Phi}(T, \Sigma, \mu)$ are non-trivial. The asymptotically isometric copies of c_0 that are built in our theorems are order copies.

Keywords: Orlicz space, subspace of order continuous elements, Luxemburg norm, Amemiya-Orlicz-norm, condition Delta-2, asymptotically isometric copy of c-sub-o, the fixed point property.

MSC: 46B04, 46E30