A Fixed Point Theorem and the Existence of a Haar Measure for Hypergroups Satisfying Conditions Related to Amenability

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Abstract. In this paper we present a fixed point property for amenable hypergroups which is analogous to Rickert's fixed point theorem for semigroups. It equates the existence of a left invariant mean on the space of weakly right uniformly continuous functions to the existence of a fixed point for any action of the hypergroup. Using this fixed point property, a certain class of hypergroups are shown to have a left Haar measure.