

**FINITE DIMENSIONAL POINTED HOPF ALGEBRAS
OVER \mathbb{S}_4**

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ABSTRACT

Let \mathbb{k} be an algebraically closed field of characteristic 0. We conclude the classification of finite-dimensional pointed Hopf algebras whose group of group-likes is \mathbb{S}_4 . We also describe all pointed Hopf algebras over \mathbb{S}_5 whose infinitesimal braiding is associated to the rack of transpositions.