

# EQUIDIMENSIONAL AND UNMIXED IDEALS OF VERONESE TYPE

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**Abstract.** This paper was motivated by a problem left by Herzog and Hibi, namely to classify all unmixed polymatroidal ideals. In the particular case of polymatroidal ideals corresponding to discrete polymatroids of Veronese type, i.e ideals of Veronese type, we give a complete description of the associated prime ideals and then, we show that such an ideal is unmixed if and only if it is Cohen-Macaulay. We also give for this type of ideals equivalent characterizations for being equidimensional.