k-Buchsbaum modules were introduced by P. Schenzel, N.V. Trung and N.T. Cuong in: 1. Verallgemeinerte Cohen-Macaulay Moduln, Math. Nachrichten 85 (1978), 57-73, 2. Toward a theory of generalized Cohen-Macaulay moduls, Nagoya Math. Journal 102 (1986), 1-49. We will discuss an algorithm to determine if homogeneous binomial ideals with variables as a system of parameters are or are not k-Buchsbaum for some k. (Received December 28, 2005)