abstract We derive the constraints set by several experiments on the quartessence Chaplygin model (QCM). In this scenario, a single fluid component drives the Universe from a non-relativistic matter dominated phase to an accelerated expansion phase behaving, first, like dark matter and in a more recent epoch as dark energy. We consider current data from SNIa experiments, statistics of gravitational lensing, FR IIb radio galaxies and X-ray gas mass fraction in galaxy clusters. We investigate the constraints from this data set on flat Chaplygin quartessence cosmologies. The observables here considered are dependent essentially on the background geometry, and not on the specific form of the QCM fluctuations. We obtain the confidence region on the two parameters of the model from a combined analysis of all the above tests. We find that the best fit occurs close to the ΛCDM limit ($\alpha = 0$). The standard Chaplygin quartessence ($\alpha = 1$) is also allowed by the data, but only at $\sim 2\sigma$ level.