This work is a study of the gildings located in the unique set of seven Baroque altarpieces in Tortosa Cathedral, and its object is to know in depth the compositional materials, techniques and alterations that can be found there. The work is divided into three parts. The first part is a historical and artistic study of the seven altarpieces, polychromed and built along a period of time of more than a century, from 1671 to 1776, and it analyzes aspects related to the context of the works: authors, contracting parties, contracts..., and architectural, ornamental and iconographic elements composing the altarpieces. The second part examines the metallic gilding recipes found in a selection of nine pictorial treatises written by 17th and 18th centuries wellknown authors. The third and last part is a detailed study of the polychromed altarpieces, that is, the work processes as engraving, gilt relief, marble techniques, colors and shading techniques and procedures. The materials used in the preparation of gildings, according to chemical analysis conducted in each of the altarpieces, and the aging process and alterations are described. With the combination of historical, documentary, artistic, technical and scientific knowledges developed in the research, we can reach a complete understanding of the gildings in the baroque altarpieces and contribute to their appraisal and preservation.