

## Abstract

Colour photography is a hundred-year-old practice. During the 19th century and the early 20th century, this type of record was obtained by means of additive synthesis. The originals produced in this way were to some extent imprecise in their rendering of colours, though the use of silver as an element forming part of the final image and the care lavished upon all that we consider of value have allowed them to come down to us. In 1935, Kodak launched its Kodachrome film onto the market, and its versatility meant that additive synthesis was finally abandoned and subtractive synthesis began to hold sway. The change of final image from silver to dyes would mean better reproduction of colour without undesirable dominant colours, with reduced production costs and increasingly mass use. The 1970s saw the use of colour photography prevail over black-and-white, and at present over 90% of the forty thousand million photographs produced each year are made in colour. In the 1980s it was found that there were obvious problems of permanence of chromogenic materials: they faded when exposed to light, and when in darkness or in cycles of light and darkness, they tended to develop blotches and to change colour. The frontier between materials for professionals and enthusiasts became blurred, while industries concealed the necessary information. The result is that a vital part of our recent history is contained in negatives and prints which are alarmingly at risk. In the case of Spain, this means that the entire period of the transition, the restoration of the monarchy and the setting up of regional governments, through to Rolling Stones concerts, are recorded on materials of little permanence. The fact that many of our archives contain the copies/prints but not the negatives (recognised by law as the intellectual property of the photographers) only increases our concern about the stability of this heritage. Permanence, deterioration and the possible solutions to the problems are the subject of this paper.