The thesis consists of three parts. In the first part, synaesthesia is described and previous research in grapheme-colour synaesthesia is analyzed. The second part introduces an experiment on Czech synaesthetes which is a replication of an experiment described by Julia Simner et al. in Non-random associations of graphemes to colours in synaesthetic and non-synaesthetic populations. The third part is concerned with an interpretation of acquired results and comparison of these results with data from English speaking synaesthetes.