The traditional winemaking of red wines consists in a simultaneous development of maceration and alcoholic fermentation. Anthocyanins, pigments responsible for colour of grapes and young red wines, are extracted from grape skins during maceration and transferred to the must. These compounds have nutritional importance, since they are bioactive compounds with high antioxidant capacity. The aim of this work was to evaluate the effects of grape variety and winemaking alternatives in the anthocyanin composition of Uruguayan red wines. For this purpose, wines of Tannat, Syrah and Merlot were produced in 2011, using alternative techniques. Control wines were elaborated by traditional maceration (TM) while addition of pectolitic enzymes (ENZ) and cold pre-fermentative maceration (CPM) before traditional maceration were the alternatives evaluated. Two batches of grapes (70 kg each one) were employed for each treatment. Anthocyanin contents were analyzed by HPLC-DAD while colour of wines was measured by CIELAB and classical indexes. Tannat wines have the highest anthocyanin contents (222.2±42.6 mg/L). Pectolytic additions enhance colour intensity and anthocyanin levels only in Tannat wines. CPM increases anthocyanin contents in Tannat and Merlot wines. Syrah wines have the highest proportions of malvidin (86.0±1.0 %) while Tannat wines were proportionally the richest in delphinidin (6.5±0.3 %) and petunidin (12.9±0.4%). Discriminant analysis of data showed significant separation of the wines of each variety since the anthocyanin profile showed the varietal fingerprint, independently from winemaking alternatives. In conclusion, the anthocyanin profile of the wines depends principally on variety rather than the differences determined by the alternative winemaking techniques.