Current evidence has linked the presence of free radicals to the development of chronic degenerative diseases, such as cancer and cardiovascular diseases. In this context, health beneficial properties due to the presence of antioxidants, are assigned to blueberry fruit. The present study aimed to quantify the antioxidant capacity by DPPH and ABTS method, in blueberry peel extracts using different fractions of ethanol-water (0-100, 40-60, 60-40, 80-20) in order to verify what the best solvent for extraction of antioxidant compounds blueberry peel. There was no significant difference at 5% significance between the aqueous (37831.34 and 50.97 uM Trolox / g extract for DPPH and ABTS) and 40% (65.37 and 35589.28 uM Trolox / g extract for DPPH and ABTS), and these showed the highest antioxidant capacity, followed by the extract 60% (43.53 and 27730.61 uM Trolox / g extract for DPPH and ABTS). Extract 80% (31.23 and 21004.45 uM Trolox / g extract for DPPH and ABTS) was ineffective for the extraction. In this way, it appears that the aqueous fraction and the 40% extract are most effective for extraction of antioxidant compounds in blueberry peel. The peel of blueberry is a promising source of antioxidant compounds and the solvent exerts a strong influence on the extraction of these compounds.