In general, almond is categorized into two types: sweet and bitter almonds. Almond is said having the functions of anti-cancer, promoting digestion, antitussive, suppressing pant, and improving one’s look. It is known as one of the food materials in our daily life. In the present study, we examined the cytotoxicity of 70% ethanol extracts of bitter almonds as well as inhibition in human anti-cancer cell line (HepG2, A549 and FL83B). By MTT assay, we demonstrated that bitter almond extracts reduced viability of anti-cancer cells via a dose- and time-dependent manner. Furthermore, apoptotic features such as cell shrinkage, taking together, our results show that bitter almond extracts presented cytotoxic effects. The bitter almond extracts-induced suppression of cell viability of anti-cancer may in part be attributed to their phytochemical (amygdalin) contents and as an effective inducer of apoptosis as well.