Antioxidants are the substances able to prevent or oxidation processes in human body as well as in food products. The important roles of reactive oxygen species in diseases related to aging and the necessity and benefits of antioxidative nutraceuticals in the preservation of diseases and promotion of healthy aging have been extensively reported in recent years. The natural antioxidants are a stable part of nutrition as they occur in almost all edible plant products. In current projects, plants (Prosopis cineraria, Rhus mysernsis and cordia dichotoma) from arid zone were investigated for their radical scavenging and antioxidative activity in different in vitro assays. According to results obtained from the present study, peel- extract of R. myserensis and seed-extract of C. dichotoma were found to be an effective antioxidant in different in vitro assay including, DPPH. Scavenging, ABTS. + Scavenging and ferric-thiocyanate method when compared to standard antioxidant compounds such as synthetic antioxidant (BHT) and &-tocopherol, a natural antioxidant. While, Qualitative analysis of the phytochemicals of extracts revealed the presence of carbohydrates, saponins, phenols, flavonoids and tannins in the plants. Polyphenols are the most numerous group of antioxidant components, and they are presents in fruits and vegetables, grains, teas, herbs, spices and wines. There is also a considerable amount of evidence revealing an association between individuals who have a diet rich in fresh fruits and vegetables and the decreased risk of cardiovascular diseases and certain forms of cancer, and it is generally assumed that these dietary elements, responsible for the protective effects, are antioxidant nutrients. Thus in coming year, there will be a great requirement of a new source of natural antioxidants for food, cosmetic and pharmaceutical industries.