

Title In vitro study of antioxidant activity of *Syzygium cumini* fruit  
Author Archana Banerjee, Nabasree Dasgupta and Bratati De  
Citation Food Chemistry Volume 90, Issue 4, May 2005, Pages 727-733  
Keyword *Syzygium cumini* fruit; Antioxidant activity; Java plum; Black plum

### Abstract

Food rich in antioxidants plays an essential role in the prevention of diseases. The fruits of wild Indian *Syzygium cumini* (L.) Skeels (Myrtaceae), also known as black plum, are edible. Traditionally they are also used to cure a number of ailments. In this paper, the antioxidant activity of the fruit skin has been analysed using different assays, such as hydroxyl radical-scavenging assay, based on the benzoic acid hydroxylation method, superoxide radical-scavenging assay, based on photochemical reduction of nitroblue tetrazolium (NBT) in the presence of a riboflavin-light-NBT system, DPPH radical-scavenging assay, and lipid peroxidation assay, using egg yolk as the lipid-rich source. Total antioxidant capacity was determined by the assay based on the reduction of Mo(VI)–Mo(V) by the extract and subsequent formation of a green phosphate/Mo(V) complex. In all the systems, a significant correlation existed between concentration of the extract and percentage inhibition of free radicals or percentage inhibition of lipid peroxidation. The antioxidant property of the fruit skin may come in part from the antioxidant vitamins, phenolics or tannins and anthocyanins present in the fruit.