Conclusion

The present investigation showed that these wild edible plants are rich in protein, fat, carbohydrate, fiber and vitamins and could provide essential nutrients required for the maintenance of normal body function. The nutritional property of these plants is similar to and also sometimes better than the common vegetables. The leaf of these plants was also found to be a significantly useful source of various minerals. The minerals like Na, K, Ca, Fe, Cu, Mg and Zn, were present in appreciable quantities. The antioxidant properties and the presence of various phenolic acids and flavonoids infer that the leaves of these plants can be used for the nutritional purpose of human being and adequate protection may be obtained against diseases arising from malnutrition. The presence of significant amount of respective bio-active components in these plants under study and variation of quantity determined ensures its usefulness for the synthesis of gold nanoparticles, without requirement of any external reducing agent. The high amount of phenolic acids present in these plants acts as an electron donor system and ligating agents to form stabilized nanoparticles. Therefore, using this plant extract will be a new and favorable alternative to the current processes to produce metallic nanoparticles in large scale without generating any toxic by-products. HRTEM studies revealed the mostly spherical shape of the AuNPs of average size of 8 nm. As, these plants are non-toxic and edible, so plant-conjugated gold nanoparticles synthesized by the green synthetic method utilizing the active ingredients present in the plant extract will be useful for various biomedical as well as nano-scientific applications.