**Abstract**

Aim: Phosphorus is abundant in soil in both organic and inorganic forms; nevertheless, it is unavailable to plants. Accordingly, soil becomes phosphorus deficient, making phosphate one of the most important nutrient elements limiting crop productivity. To prevent the phosphate deficiency, phosphate solubilizing microorganisms could play an important role in making phosphate available for plants by dissolving insoluble Phosphate. Materials and methods: The serial dilution was done in rhizospheric soil and *humicola.sp*, fungi was isolated. The morphological and molecular characters were studied. Using pikovskaya media *humicola*fungi was identified to be phosphate solubilizing. This fungus helps to promote plant growth. Result: Phosphate in the soil is essentially unavailable to plants and use of plant associated organisms may help in solubilization of mineral phosphorous for easy uptake by the plants. Fungi have the ability to solubilize phosphorous by production of organic acids and are known to have a higher efficiency of solubilization than bacteria. Increase in cost of fertilizers and worldwide energy crises, low purchasing power of farmers, increase in cost of production restricted the use of chemical fertilizers alone as a source of plant nutrient. Under such condition it has become alternative to use all available resources of plant nutrients including microorganisms like Phosphate Solubilizing Microorganisms for sustainable soil fertility and productivity. A sterile rhizospheric fungus was isolated from rhizospheric soil of *spathoglottisplicata*and was found to be dominant with highest phosphate solubilization capacity. The fungus could identify by morphological features, molecular characterization was carried was found closest homolog to *humicolasp*, with maximum identity of 98%. Conclusion: The *humicola*is found to be in symbiotic association with the plant. It can be used as a substitute for chemical fertilizer. Therefore preserves the soil fertility.