

## IN VITRO MICROPROPAGATION STUDY OF SALVADORA PERSICA L.

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**Keywords:** *In vitro*, MS, *Salvadora persica* L., IBA, BAP, KIN

*Salvadora persica* L., also known as *miswak*, belongs to the family Salvadoraceae. It is used for oral hygiene. In order to enhance the availability of this medicinal plant, attempts were made for its *in vitro* propagation using the technique of tissue culture.

The nodal segment of the *Salvadora persica* L. plant was collected from young healthy plantlets, washed with water, surface sterilized with 0.2-0.3 % mercuric chloride ( $HgCl_2$ ), cut into small pieces, and inoculated on MS medium for *in vitro* cultures (Murashige and Skoog, 1962) supplemented with growth regulators.

The MS medium was fortified with 3 % sucrose and Clerigar for solidification. The pH of MS media was adjusted to 5.6 - 5.8, and the MS media were steam sterilized in an autoclave under 15 psi and 121°C.

The medium was placed in culture bottles, inoculated with explants, and was transferred to the culture room under a 16 h photoperiod tubes light and 25±2°C temperature. At least five replicates were raised for each treatment and *in vitro* growth was observed.

Shoot regeneration was achieved from nodal segment explant. Application of BAP at a Lower concentration was found to be

effective in inducing shoot regeneration. The Maximum shoot induction along with maximum shoot length was achieved with the enrichment of 2.0 mg / l of BAP and 2.5 mg/l KIN. A similar result was reported by Kumar *et al.*, (2013). In multiplication protocol for the shoot, regeneration was also developed by Ramar and Nandagopalan (2011) to reveal that growth hormone MS medium incorporated with BAP exhibits rapid multiplication of *Salvadora persica* L.

### Acknowledgments:

The authors are thankful to the Head, Department of Botany, Dr. Babasaheb Ambedkar Marathwada University Aurangabad for providing the necessary facilities to carried out the present research work.

### References:

- Kumar S., Gulati P and Kapoor R. K. (2013). *International Journal of Current Research* 5: 1360.
- Ramar K. and Nandagopalan V. (2011). *International journal of pharmacy and life sciences* 2 (1): 499.