

## **Effects of plant growth regulator and amonium to nitrate ration on Baby masquerade Rose in tissue culture**

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Miniature roses are member of the Rosaceae family that are used in landscaping or as a coverplant. One of these roses is Baby masquerade. It has the ability of production of flowers throughout the growing season.

Most cultivars are highly heterozygous and do not breed true to type. They are , therefore, propagated vegetatively. Miniatures are often propagated from stem cuttings. It has many disadvantages, for example high risk of mortality, non homogeneity of growing and rooting.

In this research the effects of different levels of BA and NAA as growth regulators and amonium to nitrate ratio in different stages of growing *in vitro* conditions werte studied.

In stage of establishment, lateral buds taken from actively growing shoots were used. After surface sterilization, they were cultured on MS medium supplemented with different levels of BA and NAA ; and also different ratio of amonium to nitrate. In this stage the optimum levels of hormones were 0.01 mg/l NAA and 1 mg/l BA. The best percentages of amonium to nitrate ratio were 50/50 and 37/63 in 60 mM total nitrogen.

In proliferation stage, the optimum levels of hormones were 0.01 mg/l NAA and 0.5 mg/l BA . In this stage the best percentages of amonium to nitrate ratio was 0/100 that statistically it was significantly relative to others.