

# **A micropropagation technique for cauliflower (*Brassica oleracea* var. *botrytis*) to facilitate agrobacterium transformation**

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## **Summary**

A highly productive micropropagation technique was developed to facilitate Agrobacterium transformation in the recalcitrant brassica species cauliflower. Meristematic clusters were homogenised using a commercial blender and then graded through precision sieves (212–300)  $\mu\text{m}$ . From one curd was over 5000 explants were cultured in S23 liquid media supplemented with 0.2 mg L<sup>-1</sup> of kinetin and 0.1 mg L<sup>-1</sup> IBA and produced microshoots within 2 weeks. Several explant intensities (23, 34, 74 and 240  $\mu\text{L}$ ) per container containing 20 mL of culture media were investigated in terms of their effects on the subsequent growth ability of the microshoots. It was observed that the use of 34  $\mu\text{L}$  per container gave the optimal result. Five blending durations were investigated (15, 30, 60, 90 and 120 s) . It was observed that the use of 30 s gave the optimal result. The explants were cultured in agitated liquid medium which optimized the production of thousands of plants from one mother curd. Twelve combinations of growth regulator plant growth regulators (NAA and Kinetin) were used to optimize shoot and root production. This protocol has large scale propagation potential of high quality propagules which will facilitate co-culture with Agrobacterium.

**Key words:** Cauliflower, micropropagation, propagules