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Effects of NAA, 2,4-D, BA and kinetin on callus formation from ginkgo leaf

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Objectives

Establishment of callus culture method from *Ginkgo biloba* L.

Materials and Methods

1. Material & Medium

Plant - *Ginkgo biloba* L.

Medium - MS medium supplemented with NAA, 2,4-D, BA and Kinetin.

2. Methods:

Murashige and Skoog (1962)(MS) basal medium was used in all experiments, supplemented with 3% sucrose and 0.01% myo-inositol in addition to various concentrations of NAA, 2,4-D, BA and Kinetin. These were added prior to adjusting the pH to 5.8 with 1M NaOH and solidified with 3 g/L phytigel. All cultures had been maintained at 26°C. The callus formation was confirmed after 4 weeks.

Results and Discussion

The optimal combination for callus induction was NAA with BA, and concentration of callus formation yield well 10 µM NAA and 5 µM BA.

| A. | | | | | B. | | | | | C. | | | | | D. | | | | |
|-------|---|----|----|-----|-------|---|----|----|-----|-------|---|----|----|-----|-------|---|----|----|-----|
| ① \ ③ | 0 | 1 | 10 | 100 | ② \ ③ | 0 | 1 | 10 | 100 | ② \ ④ | 0 | 1 | 10 | 100 | ① \ ④ | 0 | 1 | 10 | 100 |
| 0 | 3 | 30 | 73 | 38 | 0 | 1 | 5 | 58 | 23 | 0 | 3 | 18 | 70 | 15 | 0 | 2 | 43 | 68 | 43 |
| 0.5 | 5 | 53 | 90 | 50 | 0.5 | 1 | 5 | 43 | 43 | 0.5 | 1 | 9 | 83 | 10 | 0.5 | 1 | 55 | 80 | 48 |
| 5 | 5 | 53 | 90 | 50 | 5 | 0 | 8 | 48 | 40 | 5 | 0 | 38 | 88 | 18 | 5 | 1 | 75 | 90 | 63 |
| 50 | 0 | 45 | 75 | 35 | 50 | 0 | 13 | 53 | 23 | 50 | 0 | 5 | 45 | 20 | 50 | 0 | 50 | 85 | 75 |

Table 1. Formation(%) of callus from *Ginkgo* leaf after 4weeks culture. ① NAA(µM); ② 2,4-D(µM); ③ Kinetin(µM); ④ BA(µM)

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