



Product Information Sheet

B468 BY-2 Medium

Properties

Form:	Powder
Appearance:	White to Yellow
Application:	Cellular Biology/Tissue Culture
Solubility:	Soluble in Water
Typical Working Concentration:	34.63 g/L
Storage Temp:	2-6 °C
Storage Temp of Stock Solution:	Stock solutions are not suggested, as precipitates may form.
Other Notes:	Contains the macro- and micronutrients, vitamins, plant growth regulators and supplements as described by Correa et al. (2004) for callus induction.

Formula (mg/L)

Ammonium Nitrate	1650	Potassium Iodide	0.83
Boric Acid	6.2	Potassium Nitrate	1900
Calcium Chloride, Anhydrous	332.2	Potassium Phosphate Monobasic	350
Cobalt Chloride•6H ₂ O	0.025	Zinc Sulfate•7H ₂ O	8.6
Cupric Sulfate•5H ₂ O	0.025	2,4-Dichlorophenoxyacetic Acid	2
Na ₂ EDTA•2H ₂ O	37.26	Myo-inositol	100
Ferrous Sulfate•7H ₂ O	27.8	Nicotinic Acid	1
Magnesium Sulfate Anhydrous	180.7	Pyridoxine HCl	1
Manganese Sulfate•H ₂ O	16.9	Thiamine HCl	10
Molybdic Acid, Na Salt•2H ₂ O	0.25	Sucrose	30000

Application Notes

Tobacco Bright Yellow-2 (BY-2) cells, which have been described as the HeLa cells of the plant biology community, are very a useful research tool due to their ease of transformation, manipulation and homogeneity. The homogeneity of the BY-2 cells allows for the ability to analyze cellular dynamics, such as cell cycle progression.

This medium is formulated to provide the essential vitamins and nutrients the tobacco calli will need while in culture. It is recommended that the tobacco cultures are transferred to new medium at least monthly to continue to provide the necessary nutrients to the plant cells. This medium can be used as a solid (with agar) or liquid (without agar), depending upon research requirements.

References

- Brandizzi F, Irons S, Kearns A and Hawes C (2003) BY-2 Cells: Culture and Transformation for Live Cell Imaging. *Current Protocols in Cell Biology* 1.7.1-1.7.16.
- Correa WL, Gomes LL, Margis R, Vaslin MFS (2004) Suppression of post-transcriptional gene silencing by callus induction and virus infection reveals the existence of aberrant RNAs. *Plant Sci* 167: 159–164

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