

Product Information

Shields and Sang M3 Insect Media

Insect tissue culture media have been formulated to mimic the main properties of the hemolymph of specific insects. A survey of the formulas of these media reveals significant differences in their composition.¹ Different media designed for the same species may differ more than two media designed for insects of different orders. Various media have been devised for the *in vitro* culture of *Drosophila* cells and tissues.^{2,3} The most extensively used are Echalié and Ohanessian's D-22 medium, Schneider's medium, and Shields and Sang M3 medium. *Drosophila* cells have been employed to study a variety of biological processes⁴ including genetics, endocrinology, physiology, and cell biology as well as recombinant protein expression⁵.

When supplemented with 5–20% heat-inactivated fetal bovine serum, Shields and Sang M3 medium has been found to support the rapid growth of both primary and established cultures of *Drosophila melanogaster* cells.^{6,7} The medium has been used for the growth and maintenance of the cell lines originally derived by Sang and coworkers from *Drosophila* embryos and cell lines from other laboratories (e.g. Schneider's lines 1-3, and Echalié and Ohanessian's K line and its derivatives).

	S8398	S3652
	[Powder]	[1x]
COMPONENT	g/L	g/L
Inorganic Salts		
CaCl ₂ (anhydrous)	0.760274	0.760274
MgSO ₄ (anhydrous)	2.149128	2.149128
KHCO ₃	—	0.5
NaH ₂ PO ₄	0.88	0.88
Amino acids		
β-Alanine	0.25	0.25
L-Alanine	1.5	1.5
L-Arginine	0.5	0.5
L-Asparagine (anhydrous)	0.3	0.3
L-Aspartic Acid	0.3	0.3
L-Cystine · HCl	0.02	0.02
L-Glutamic Acid · K	7.88	7.88
L-Glutamic Acid · Na	6.53	6.53
L-Glutamine	0.6	0.6
Glycine	0.5	0.5
L-Histidine	0.55	0.55
L-Isoleucine	0.25	0.25
L-Leucine	0.4	0.4
L-Lysine · HCl	0.85	0.85
L-Methionine	0.25	0.25
L-Phenylalanine	0.25	0.25
L-Proline	0.4	0.4
L-Serine	0.35	0.35
L-Threonine	0.5	0.5
L-Tryptophan	0.1	0.1
L-Tyrosine · 2Na	0.3601	0.3601
L-Valine	0.4	0.4

Vitamins and others		
Choline Chloride	0.05	0.05
Oxalacetic Acid	0.25	0.25
D(+)-Glucose	10.0	10.0
BIS-TRIS	1.05	1.05
Yeast Extract	1.0	1.0
Add		
KHCO ₃	0.5	—

References

1. Mitsuhashi, J., Media for insect cell cultures. in: *Advances in Cell Culture* vol. 2, Maramorosch, K., ed., Academic Press (New York, NY: 1982) pp 133-196.
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4. Schneider, I., and Blumenthal, A., in: *Biology and Genetics of Drosophila* vol. 2B, Ashburner, M., and Wright, T.R.F., eds., Academic Press (New York, NY: 1978) pp 265-315.
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6. Shields, G., and Sang, J.H., Improved medium for culture of *Drosophila* embryonic cells. *Drosophila Information Service*, **52**, 161 (1977).
7. Shields, G., Dubendorfer, A., and Sang, J.H. Differentiation *in vitro* of larval cells from early embryonic cells of *Drosophila melanogaster*. *J. Embryol. Exp. Morphol.*, **33**, 159-175 (1975).

VNC,JG,PD,JF,ALF,MAM 03/15-1