3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Schneider's Insect Media

Many insect tissue culture media were formulated to mimic the main physico-chemical properties of the body fluid of specific insects. A cursory survey of the formulas of culture media designed for insect tissues reveals great qualitative and quantitative disparities in composition.[1] Different media designed for the same species may exhibit less similarity 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 Schneider's medium and Echalier and Ohanessian's D-22 medium. *Drosophila* cells have been employed to study a variety of biological processes[4] including genetics, endocrinology, physiology, and cell biology as well as recombinant protein expression.[5]

When supplemented with 5–20% heat-inactivated fetal bovine serum, Schneider's medium has been found to support the rapid growth of both primary and established cultures of cells derived from *Drosophila melanogaster*.[6,7] The medium has been used for the growth and maintenance of the cell lines originally derived by Schneider[8] from *Drosophila* embryos as well as the culture of cells from other dipteran species.[9]

	S9895	**S0146**
	[Powder]	[1×]
COMPONENT	g/L	g/L
Inorganic Salts		
$CaCl_2$ (anhydrous)	—	0.6
$MgSO_4$ (anhydrous)	1.807221	1.807221
KCl	1.6	1.6
$NaHCO_3$	—	0.4
NaCl	2.1	2.1
Na_2HPO_4	0.7	0.7
Amino acids		
β-Alanine	0.5	0.5
L-Arginine	0.6	0.6
L-Aspartic Acid	0.4	0.4
L-Cystine · 2HCl	0.026732	0.026732
L-Cysteine	0.06	0.06
L-Glutamic Acid	0.8	0.8
L-Glutamine	1.8	1.8
Glycine	0.25	0.25
L-Histidine	0.4	0.4
L-Isoleucine	0.15	0.15
L-Leucine	0.15	0.15
L-Lysine	1.65	1.65
L-Methionine	0.15	0.15
L-Proline	1.7	1.7
L-Serine	0.25	0.25
L-Threonine	0.35	0.35
L-Tryptophan	0.1	0.1
L-Tyrosine · 2Na · $2H_2O$	0.07202	0.7202
L-Valine	0.3	0.3

Vitamins and others		
Fumaric acid	0.06	0.06
D(+)-Glucose	2.0	2.0
α-Ketoglutaric acid	0.35	0.35
L-(-)-Malic acid	0.6	0.6
Succinic acid	0.06	0.06
D(+)-Trehalose	2.0	2.0
Yeast Extract	2.0	2.0
Add		
$CaCl_2$ (anhydrous)	0.6	—
$NaHCO_3$	0.4	—

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.
2. Echalier, G., *In vitro* culture of *Drosophila* cells and applications in physiological genetics. in: Invertebrate Tissue Culture, Kurstak, E., and Maramorosch, K., eds., Academic Press (New York, NY: 1976) pp. 131-150.
3. Schneider, I., and Blumenthal, A. *Drosophila* cell and tissue culture. in: Biology and Genetics of Drosophila vol. 2B, Ashburner, M., and Wright, T.R.F., eds., Academic Press (New York, NY: 1978) pp. 266-315.
4. Kuroda, Y., *Drosophila* tissue culture: Retrospect and prospect. in: Invertebrate Cell Culture Applications, Maramorosch, K., and Mitsuhashi, J., eds., Academic Press (New York, NY: 1982) pp. 53-104.
5. Van der Straten, A. et al., Efficient expression of foreign genes in cultured *Drosphila melanogaster* cells using hygromycin B selection. in: Invertebrate Cell System Applications vol. 1, Mitsuhasi, J., ed., CRC Press (Boca Raton, FL: 1989) pp 183-195.
6. Schneider, I., Differentiation of larval *Drosophila* eye-antennal discs *in vitro*. J. Exp. Zool., **156**, 91-104 (1964).
7. Schneider, I., Histology of larval eye-antennal disc and cephalic ganglia of *Drosophila* cultured *in vitro*. J. Embryol. Exp. Morphol., **15**, 271-279 (1966).
8. Schneider, I., Cell line derived from late embryonic stages of *Drosophila melanogaster*. J. Embryol. Exp. Morphol., **27**, 353-365 (1972).
9. Schneider, I., in: Handbook of Practical Tissue Culture Applications, Maramorosch, K., and Hirumi, H. eds., Academic Press (New York, NY: 1979).

JG,ISP,PD,JF,ALF,MAM 04/14-1