

Table 1. Comparison of chemical ingredients in the TAP and M9 growth media. TAP medium is used for growing *Chlamydomonas* heterotrophically or photo-heterotrophically. M9 medium is the standard minimal medium for growing bacteria. **Note:** Hunter's trace element is an ingredient in the TAP medium. TAP Trace elements and EDTA shown in the table are components in the Hutner's trace element solution. pH of Hutner's solution is adjusted to 6.5 using KOH pellets before it is used to make the TAP medium. Both media have (pH 7-7.2). Acetate in the TAP medium can be substituted with alternative carbon sources. TAP medium minus acetate is the TP medium in our work.

Chemical	Final concentration in 1 L TAP medium	Final concentration in 1L M9 minimal medium
Na ₂ HPO ₄ ·7H ₂ O	-	47.74 mM; M9 salt
KH ₂ PO ₄	0.396 mM; phosphate solution	22.04 mM; M9 salt
K ₂ HPO ₄	0.6 mM; phosphate solution	-
NaCl	-	8.56 mM; M9 salt
NH ₄ Cl	7.48 m; TAP salt	18.69 mM; M9 salt
MgSO ₄ .7H ₂ O	0.405 mM; TAP salt	2 mM
Carbon source	0.1% glacial acetic acid (99.7%)	0.4 % (glucose or any other carbon source)
CaCl ₂ .2H ₂ O	0.4525 mM; TAP salt	0.1mM
Tris base	19.97 mM	
FeSO ₄ .7H ₂ O	0.018 mM; trace element	-
ZnSO ₄ .7 H ₂ O	0.0765mM; trace element	-
H ₃ BO ₃	0. 184 mM; trace element	-
MnCl ₂ .4H ₂ O	0.0256 mM; trace element	-
CuSO ₄ .5H ₂ O	0.0063 mM; trace element	-
(NH ₄) ₆ Mo ₇ O ₂₄ .4 H ₂ O	0.00089 mM; trace element	-
CoCl ₂ .6H ₂ O	0.00068 mM; trace element	-
EDTA	134 mM	