

Chemical	Maximum concentration mM	Reference
Ammonium chloride	50	[13]
Ammonium nitrate	50	This paper
Ammonium sulphate	50	[7]
Potassium sulphate	50	[7]
Potassium nitrate	50	This paper
Sodium carbonate	1	This paper
Sodium chloride	8.6	[27]
Dipotassium hydrogen phosphate	33	This paper
Sodium di-hydrogen phosphate	17	[7]
Urea	50	[5]
Citric acid	10	[5]
MOPS	50	[26]
Calcium chloride	1	[23]
Iron sulphate	0.1	[23]
Magnesium sulphate	1	[23]
NTA sodium salt	1	[23]
EDTA sodium salt	1	[13]

**Table S2. Defined media ingredients.** Commonly used ingredients found in defined media recipes for a variety of microorganisms identified in the literature with maximum concentrations used during the DoE experiments.