

Table 1 Chemical content and physiological parameters of *M. extorquens* AM1 cells growing on methanol

Macromolecule	% Cell Dry Weight $\pm \sigma$		Data source	Organism source
Protein	59.13 \pm 2.11		This study	<i>M. extorquens</i> AM1
Carbohydrate	16.43 \pm 1.09		This study	<i>M. extorquens</i> AM1
Rhamnose (polymer)	8.92 \pm 0.92		This study	<i>M. extorquens</i> AM1
Glucose (polymer)	5.62 \pm 0.52		This study	<i>M. extorquens</i> AM1
Trehalose	1.22 \pm 0.20		This study	<i>M. extorquens</i> AM1
Glucosamine (polymer)	0.09 \pm 0.67		This study	<i>M. extorquens</i> AM1
RNA	8.20 \pm 0.68		This study	<i>M. extorquens</i> AM1
Fatty acid	4.95 \pm 0.29		This study	<i>M. extorquens</i> AM1
DNA	3.00 -		Neidhart <i>et al.</i> ; GC content: Vuilleumier <i>et al.</i> (2009)	<i>E. coli</i>
PHB	2.36 \pm 0.05		This study	<i>M. extorquens</i> AM1
Polyamine	0.40 -		Neidhart <i>et al.</i>	<i>E. coli</i>
Carotenoid	0.023 -		Konovalova <i>et al.</i> (2007)	<i>M. extorquens</i> AM1
Intracellular metabolites	2.64 -		Kiefer <i>et al.</i> (2008); Guo <i>et al.</i> (2006); Guo <i>et al.</i> (2007); Vorholt <i>et al.</i> (1998); Crowther <i>et al.</i> (2008)	<i>M. extorquens</i> AM1
Inorganic ions	1.01 -		Neidhart <i>et al.</i>	<i>E. coli</i>
Cofactors	0.22 -		Neidhart <i>et al.</i>	<i>E. coli</i>
SUM	98.36			
Physiological parameters	value $\pm \sigma$	units	Data sources	Organism source
Growth rate	0.168 \pm 0.003	h ⁻¹	This study	<i>M. extorquens</i> AM1
Specific methanol uptake rate	15.0 \pm 0.25	mmol.g ⁻¹ .h ⁻¹	This study	<i>M. extorquens</i> AM1
Specific proton production rate	0.22 \pm 0.01	mmol.g ⁻¹ .h ⁻¹	This study	<i>M. extorquens</i> AM1
Growth-associated ATP maintenance	59.81 -	mmol.g ⁻¹	Neidhart <i>et al.</i>	<i>E. coli</i>
Macromolecular building costs	26.65 -	mmol.g ⁻¹	This study	<i>M. extorquens</i> AM1
Non-Growth-associated ATP maintenance	9.5 -	mmol.g ⁻¹ .h ⁻¹	Rokem <i>et al.</i> (1978)	<i>Methylobacterium</i>

7. Crowther GJ, Kosaly G, Lidstrom ME: Formate as the Main Branchpoint for Methylo-trophic Metabolism in *Methylobacterium extorquens* AM1. *J Bacteriol* 2008.
20. Vuilleumier S, Chistoserdova L, Lee MC, Bringel F, Lajus A, Zhou Y, Gourion B, Barbe V, Chang J, Cruveiller S, *et al.*: *Methylobacterium* genome sequences: a reference blueprint to investigate microbial metabolism of C1 compounds from natural and industrial sources. *PLoS One* 2009, **4**: e5584.
32. Guo X, Lidstrom ME: Physiological analysis of *Methylobacterium extorquens* AM1 grown in continuous and batch cultures. *Arch Microbiol* 2006, **186**:139-149.
33. Guo X, Lidstrom ME: Metabolite profiling analysis of *Methylobacterium extorquens* AM1 by comprehensive two-dimensional gas chromatography coupled with time-of-flight mass spectrometry. *Biotechnol Bioeng* 2008, **99**:929-940.
34. Kiefer P, Portais JC, Vorholt JA: Quantitative metabolome analysis using liquid chromatography-high-resolution mass spectrometry. *Anal Biochem* 2008, **382**:94-100.

64. Neidhardt FC: **Chemical composition of Escherichia coli.** In *Escherichia coli and Salmonella: Cellular and Molecular Biology. Volume 1.* Edited by: Neidhardt FC, Curtiss R, Ingraham JL, Lin ECC, Low KB, Magasanik B, et al. Washington, D.C.: American Society for Microbiology Press; 1996:3-6.
65. Konovalova HM, Shylin SO, Rokytko PV: **Characteristics of carotinoids of methylotrophic bacteria of Methylobacterium genus.** *Mikrobiol Z* 2007, **69**:35-41.
66. Vorholt JA, Chistoserdova L, Lidstrom ME, Thauer RK: **The NADP-dependent methylene tetrahydromethanopterin dehydrogenase in Methylobacterium extorquens AM1.** *J Bacteriol* 1998, **180**:5351-5356.