

TABLE 1. Enzyme activities relevant for autotrophic CO₂ fixation and glyoxylate assimilation in *C. aurantiacus* at 55°C^a

Enzyme or enzyme activity	Sp act (nmol min ⁻¹ mg of protein ⁻¹) under the following growth conditions:	
	Autotrophic	Heterotrophic
Acetyl-CoA carboxylase	10–16	25
Propionyl-CoA carboxylase	19	18
Malonyl-CoA reduction (NADPH)	162	79
3-Hydroxypropionate reduction (NADPH)	104	32
Succinate dehydrogenase ^b (oxidized dichlorophenolindophenol)	126	443
Fumarate hydratase	404	422
Malyl-CoA lyase plus succinyl-CoA:L-malate CoA transferase	23–33	<1
L-Malyl-CoA lyase	52–220	7–19
PEP carboxylase	247	181
Pyruvate phosphate dikinase	12	11
Citrate synthase	33	178
Aconitase	29	48
Isocitrate dehydrogenase (NADP ⁺)	47	103
2-Oxoglutarate dehydrogenase		
NAD ⁺	<1	3.2
NADP ⁺	<1	3.6
Malate dehydrogenase		
NADH	447	645
NADPH	336	460
Pyruvate dehydrogenase		
NAD ⁺	<1	<1
NADP ⁺	<1	≤2

^a Enzyme activities were comparatively studied with extracts of cells anaerobically grown in the light under autotrophic (H₂-CO₂) and heterotrophic (Casamino Acids-yeast extract) conditions. The following enzyme activities were searched for but were not detectable under either set of growth conditions: pyruvate carboxylase and pyruvate water dikinase. Mean values were obtained from at least two determinations and two cell batches. Standard deviations generally were ±20%.

^b Milligrams of protein in the solubilized membrane protein fraction.