

TABLE I

*Atomic absorption measurement of cellular copper content*

Cultures were grown to  $A_{660\text{ nm}} = 1.0$  in medium containing  $[\text{Cu}^{2+}]$  as indicated. Cells were washed five times with MES-glucose buffer and then resuspended in the same buffer to  $A_{660\text{ nm}} = 1.5$ . For copper uptake,  $10\ \mu\text{M}\ \text{Cu}\cdot\text{His}_2$  was added; at the indicated time 1 ml of culture was taken for analysis by flameless atomic absorption spectrophotometry. Values are means  $\pm$  S.E. ( $n = 4$ ). Strain designations are: WT, wild type, AS2-2A; CUP1 $\Delta$ , 51.2-2, thionein deletion strain.

Strain, medium	Time of incubation		
	0 min	60 min	120 min
	<i>nmol copper/mg protein</i>		
WT, $\text{Cu}^{2+}$ -free	<0.3	$6.0 \pm 0.4$	$7.2 \pm 0.4$
WT, $5\ \mu\text{M}\ \text{Cu}^{2+}$	$11.4 \pm 0.8$	$16.5 \pm 1.0$	$16.8 \pm 1.1$
CUP1 $\Delta$ , $\text{Cu}^{2+}$ -free	<0.3	$6.4 \pm 0.3$	$7.4 \pm 0.4$
CUP1 $\Delta$ , $5\ \mu\text{M}\ \text{Cu}^{2+}$	$3.2 \pm 0.2$	$7.6 \pm 0.4$	$8.1 \pm 0.5$