

TABLE 1**GSH half-lives in cells grown under different conditions**

Apparent ($^{app}T_{1/2}^{GSH}$) and corrected ($^{cor}T_{1/2}^{GSH}$) half-lives of GSH under different growth conditions are shown. f^{GSH} , given as $100 \times f^{GSH}$ for better readability, is the fraction of intracellular GSH converted into Cys in 1 min. Values between parentheses are the S.D. of experiments repeated at least three times (see supplemental information, Part 4). Except for the standard conditions, f^{GSH} and $^{cor}T_{1/2}^{GSH}$ are only given as rough guides, as their calculation is based on assumptions that may not be true under the corresponding conditions (see supplemental information, Part 4 for details). Measurement of $Prot^{Cys}/Meta^{Cys}$ is described under "Experimental Procedures." NA, not applicable.

Condition	$^{app}T_{1/2}^{GSH}$	$Prot^{Cys}/Meta^{Cys}$	$100 \times f^{GSH}$	$^{cor}T_{1/2}^{GSH}$
	<i>min</i>		<i>min⁻¹</i>	<i>min</i>
Standard (NH_4^+ , SO_4^{2-})	174 (17)	1.0	0.80 (0.10)	63 (7)
Sulfur starvation (NH_4^+ , -)	26 (6)	3.5	4.47 (0.93) or 3.89 (0.88) ^a	12 (3.5) or 14 (4) ^a
GSH 0.1 mM (NH_4^+ , GSH)	57 (19)	1.5	NA	NA
Chromate 10 μ M (NH_4^+ , SO_4^{2-})	71 (27)	2.4	1.96 (0.63) or 1.67 (0.51) ^a	29 (10) or 34 (13) ^a
Met 0.5 mM (NH_4^+ , Met)	> 500	0.2	NA	NA
Cadmium 5 μ M (NH_4^+ , SO_4^{2-})	> 500	0.2	NA	NA
H_2O_2 ^b (NH_4^+ , SO_4^{2-})	> 500	0.1	NA	NA
Glu 10 mM (Glu, SO_4^{2-})	214 (5)	1	0.62 (0.05)	82 (7)
Nitrogen starvation (-, SO_4^{2-})	201 (29)	0.9	1.96 (0.63)	66 (23)

^a In this case the model is different (see supplemental information, Part 4.2).

^b 0.2 μ M (final concentration) of H_2O_2 was added 3 times, at $t = 0, 40$ min, and 80 min.