

How do I calculate part per million (ppm) from the catch weight?

To convert the catch weight typically provided in micrograms (μg) to an in-stack concentration, use the following equation:

$$\text{ppm} = \frac{(\text{ug}/\text{MW})}{(\text{Vstd}/\text{GC})}$$

Where

- ug total mass of analyte collected
- MW molecular weight of analyte
- Vstd sample volume (i.e. volume of gas sampled) standardized to STP (68 ° F, 29.92 in Hg) in liters
- GC gas constant (24.056) - molar gas volume at STP (68 ° F, 29.92 in Hg)

Example spreadsheet calculation:

	A	B	C
1			Methanol
2		Sample catch (ug)	278
3		M.W.	32.0
4		Sample vol (Vstd)	61.0
5		GC	24.056
6		PPM	3.43
7			

Formula bar: C6 = =(C2/C3)/(C4/C5)

If methanol is the target analyte (mw = 32), during a test run the final catch weight was 278 μg , and corrected volume sampled is 61.0 liters, use the equation defined in cell C6 (see formula bar).