

Instructions for use silver and copper corrosion rate sheets.

The two spreadsheets allow calculation of an annual corrosion rate. This is given in Angstrom (10^{-10}m). The sheets use 12 monthly or 30 day period average measurements of temperature, RH and various gas concentrations in (ppb). The periods can start at any date.

For pollution data, diffusion tube data is most common and often uses 30 day measurement periods. Some institutions have continuous data available and this needs to be averaged over 30 day periods. As does continuously measured temperature and RH data.

The original research considered hydrogen chloride concentrations that are not routinely measured. Some indications of the impact of leaving this data out are included, but will depend on the environment. Similarly hydrogen sulfide is only rarely measured, again indications are included for the impact on copper corrosion rate. Hydrogen sulfide is however often the dominant factor driving silver tarnish and must be included for accurate predictions. Some diffusion tube have detection limits around 30ppt, which will still cause a significant tarnish rate.