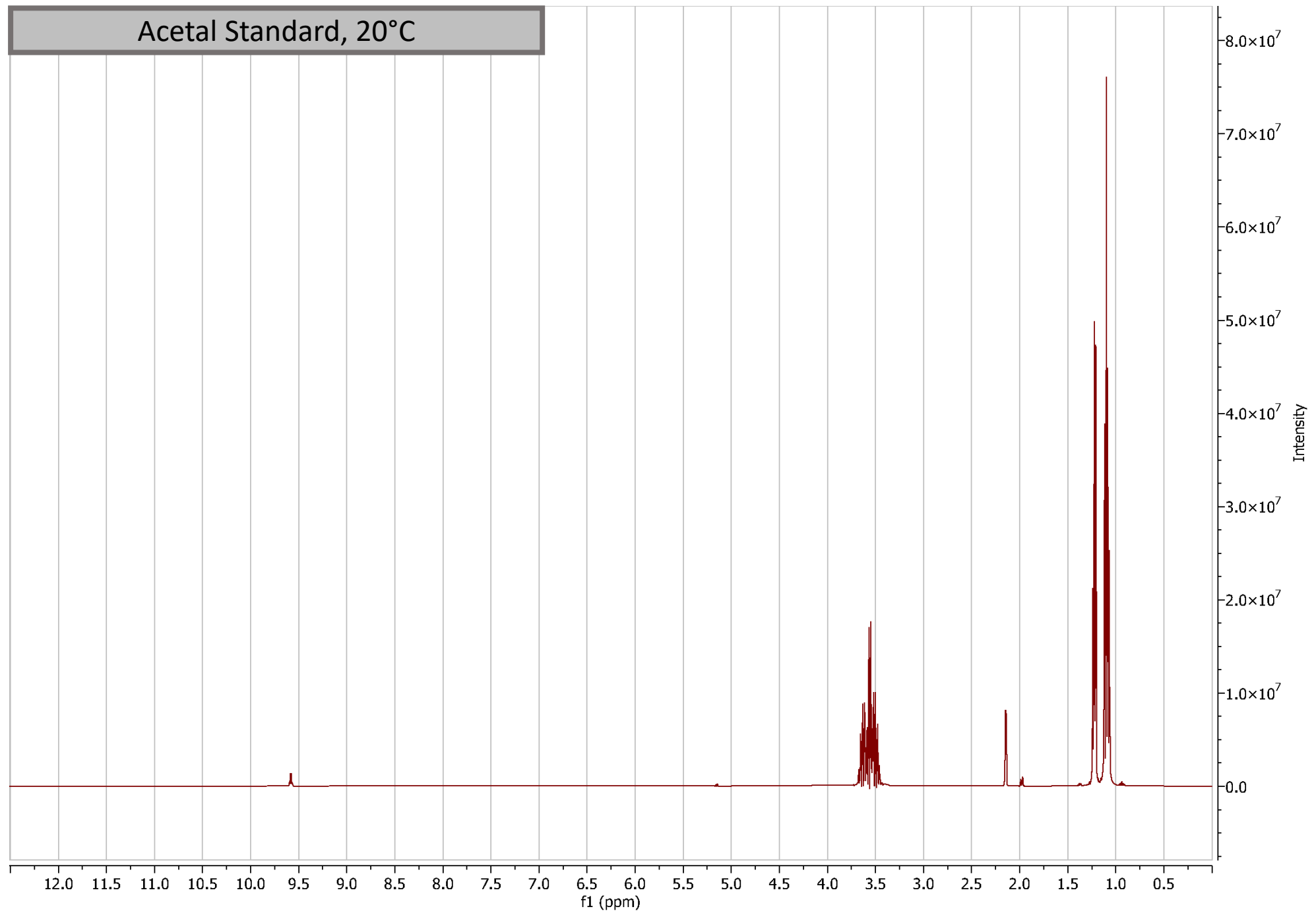


Supplemental Figure 1:

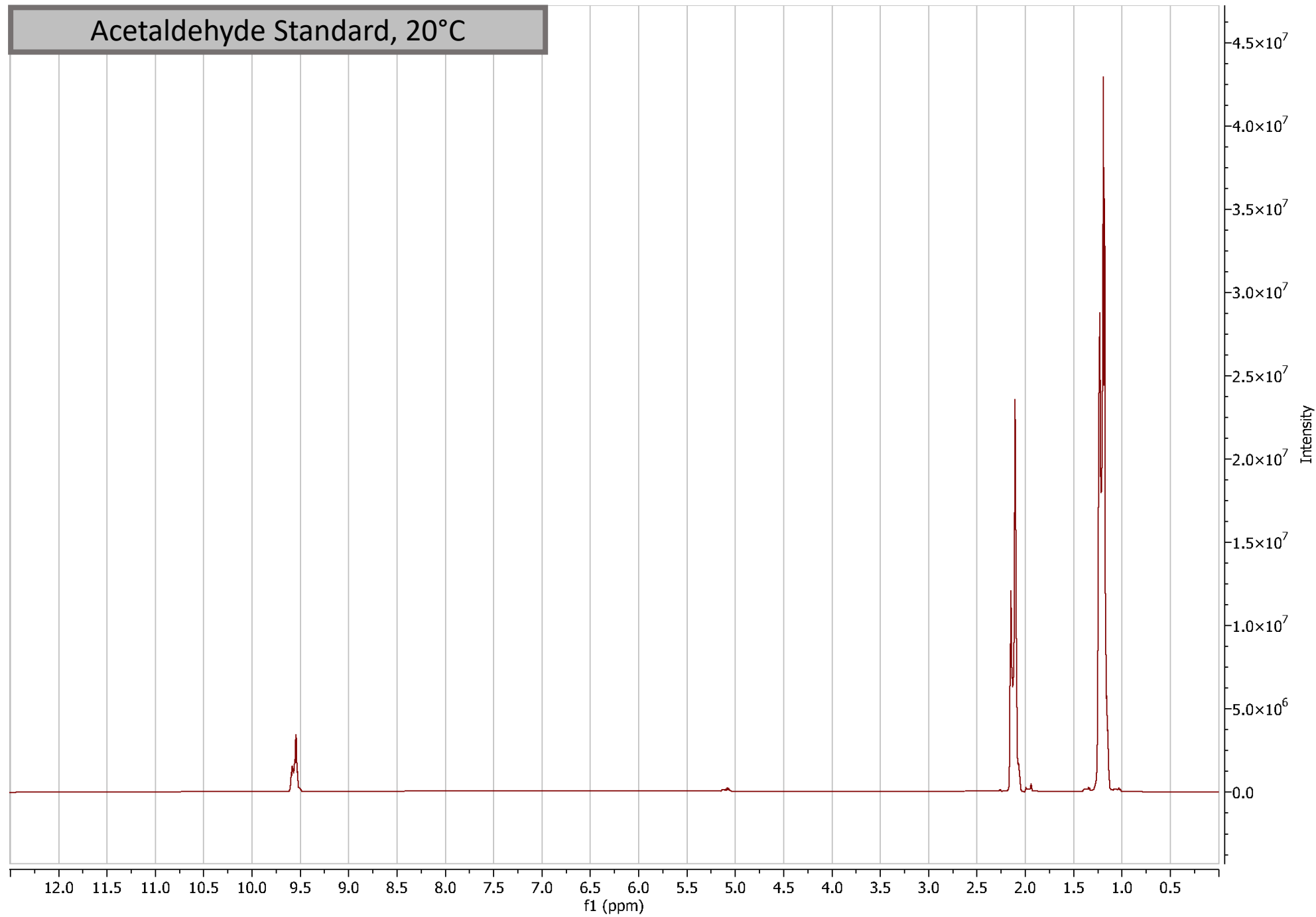
Standards of reagents and a selection of possible products from reactions. All standards were acquired via proton nuclear magnetic resonance (^1H -NMR) at 400mHz with a D_2O solvent. Analysis was carried out at ambient room temperatures (20°C). Samples were run via ^1H -NMR on Nano-400 instrumentation with a 5 mm iProbe cryoprobe with an X-nuclei inner coil and ^1H outer coil. Data gathering was carried out using the program TopSpin® 4.0 pl6 running on CentOS® 5.0. Spectral data analysis and interpretation was carried out using MestRe Nova software 5.3.1.

Spectra included in alphabetical order are as follows: acetal, acetaldehyde, acetamide, acetic acid, acetonitrile, ethanol, malonic acid, malonamide, malononitrile, 1,3-propanediol, pyrazole, pyrazoline, and sodium formate. Some spectra have a cut at 4.5 to 5 ppm where a water peak could not be suppressed but does not affect the quality of the standard spectra. Experimental spectra were compared to standard spectra for product identification. pH was not adjusted between the experimental samples and the standards.

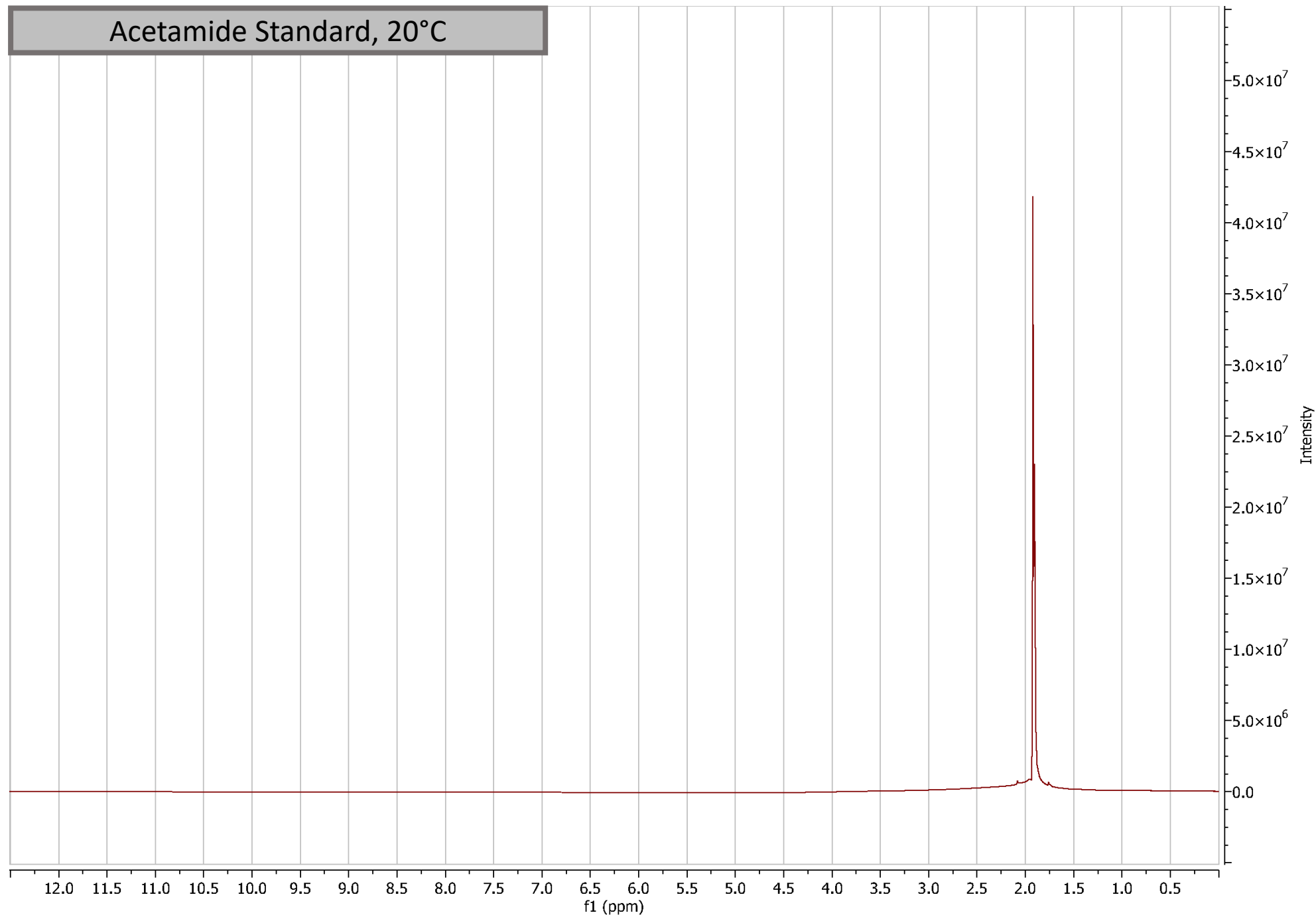
Acetal Standard, 20°C



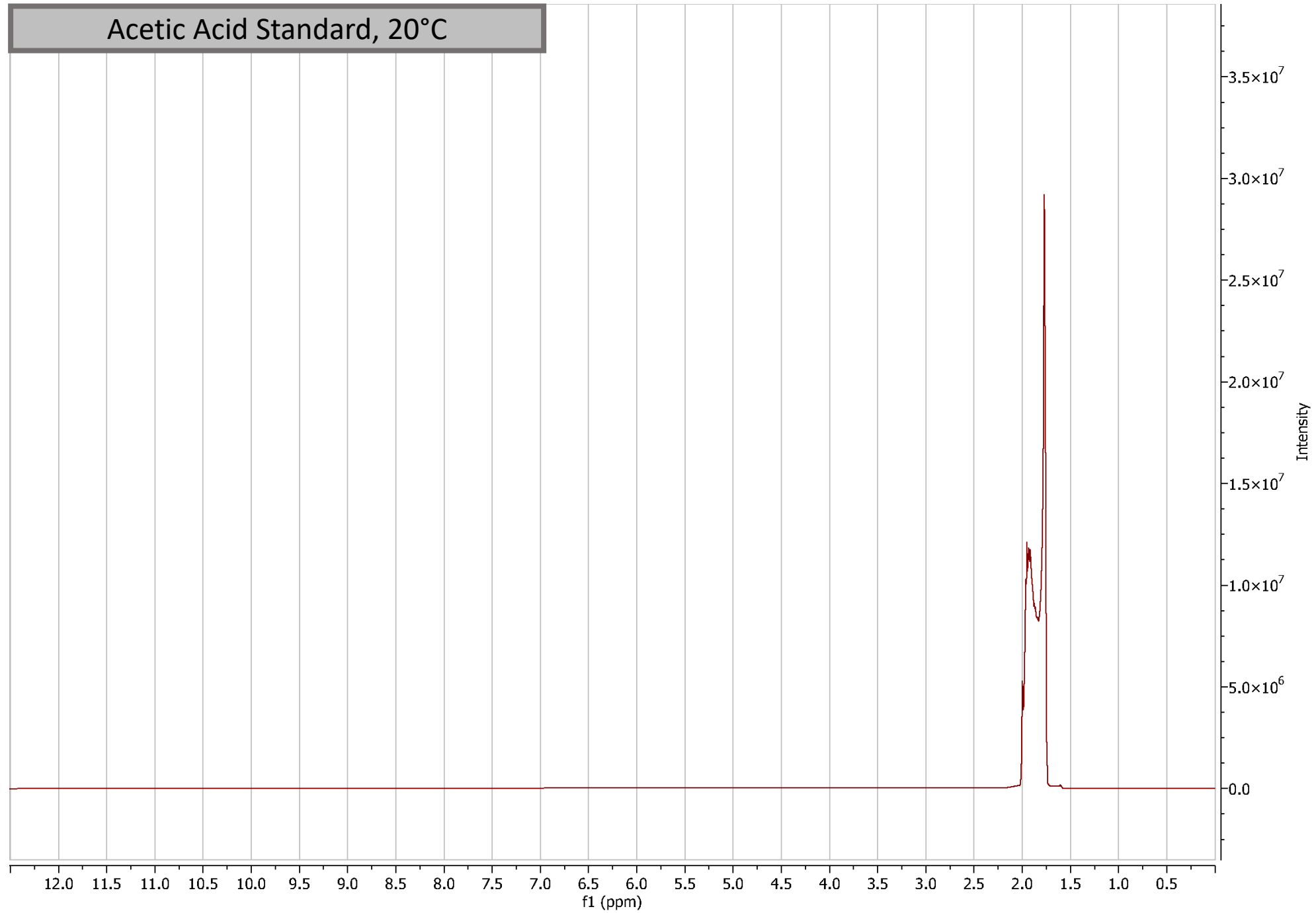
Acetaldehyde Standard, 20°C



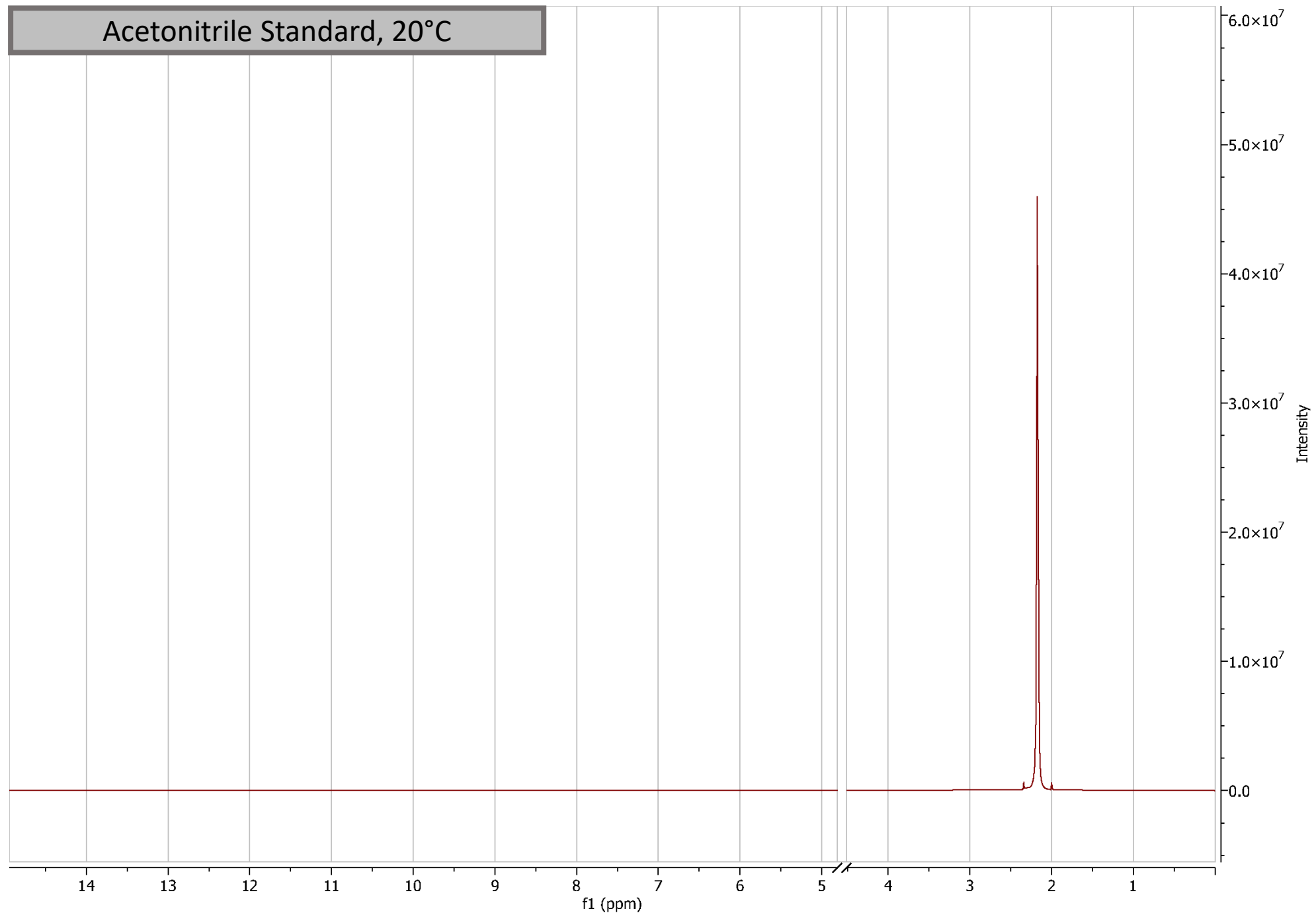
Acetamide Standard, 20°C



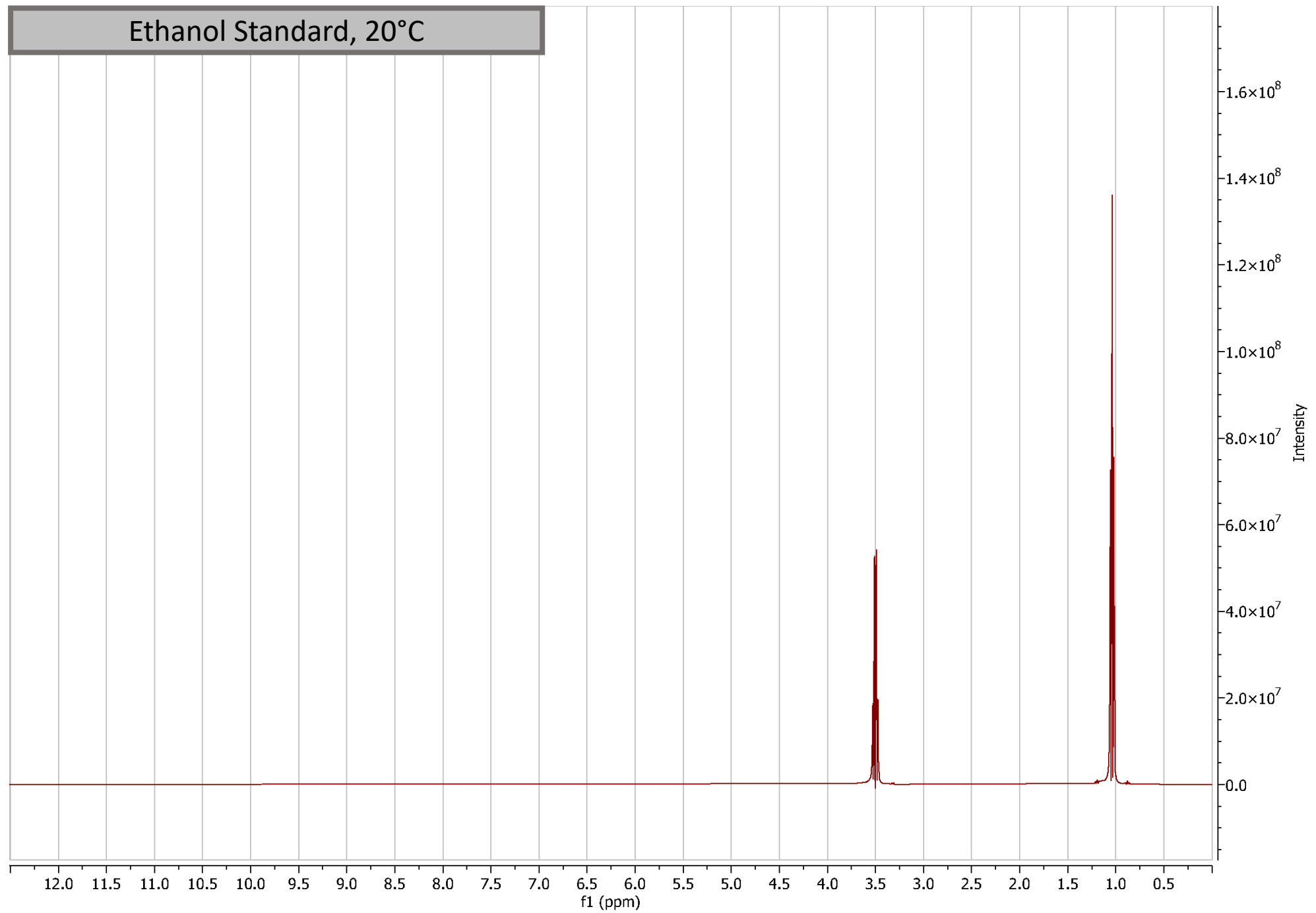
Acetic Acid Standard, 20°C



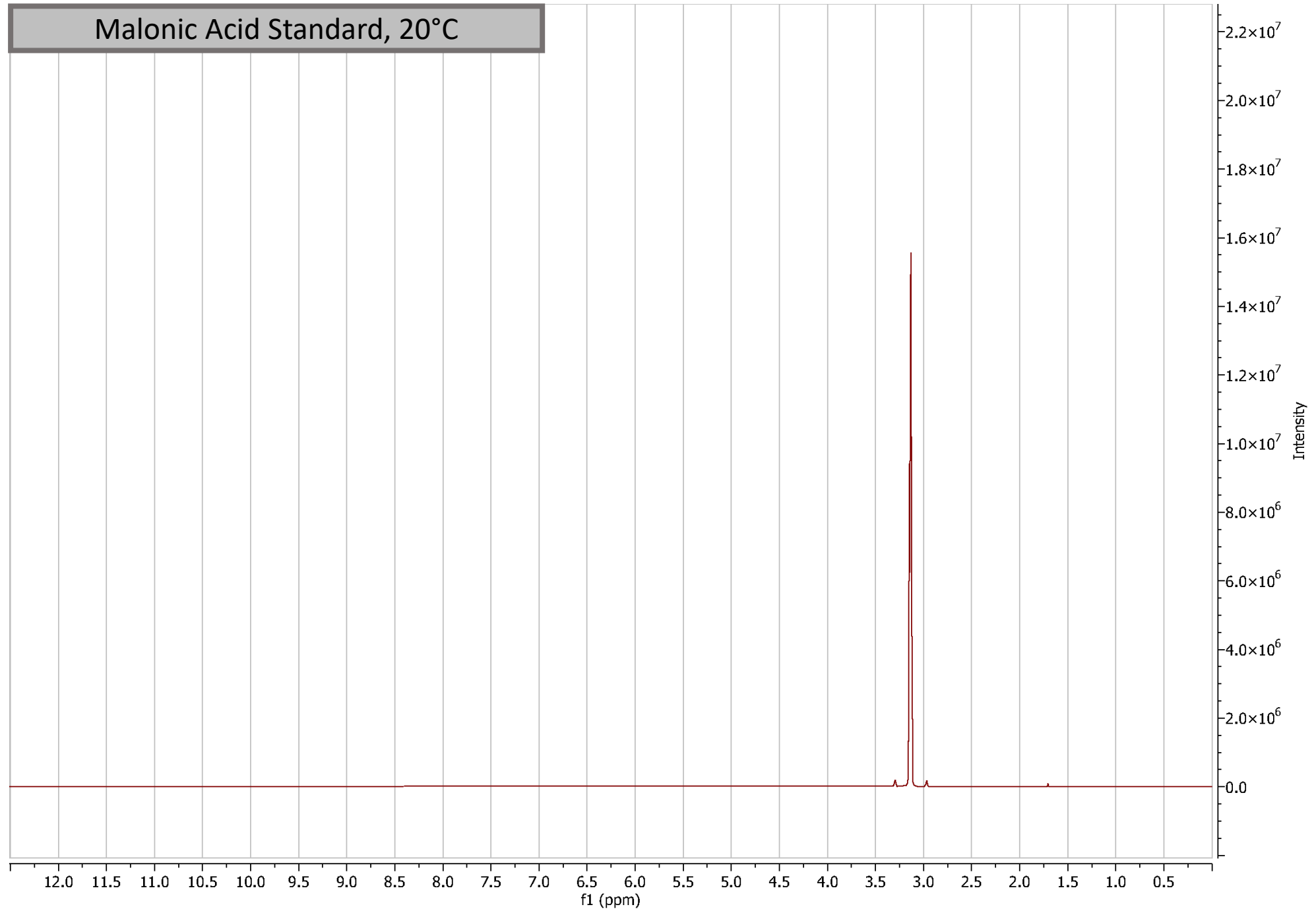
Acetonitrile Standard, 20°C



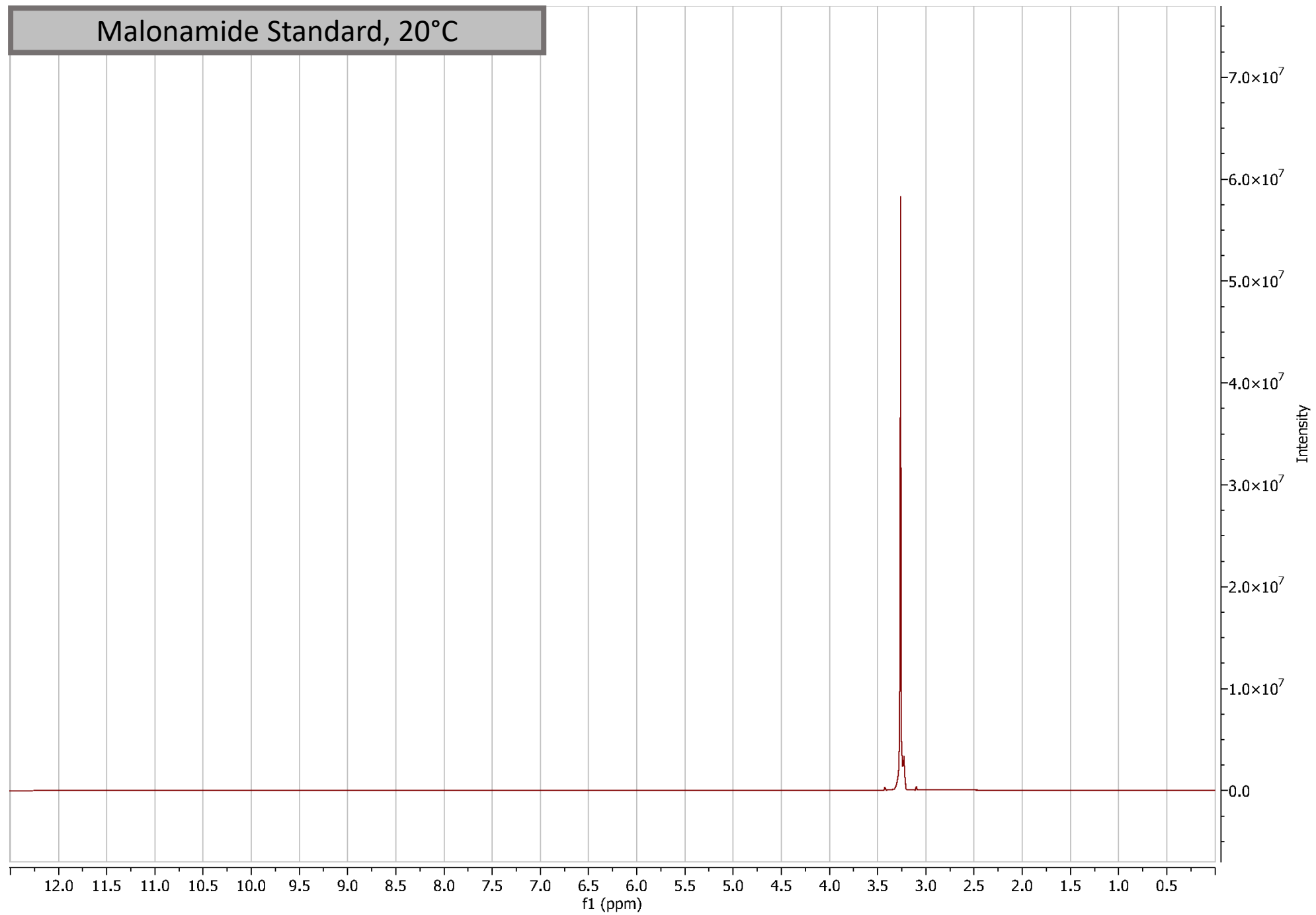
Ethanol Standard, 20°C



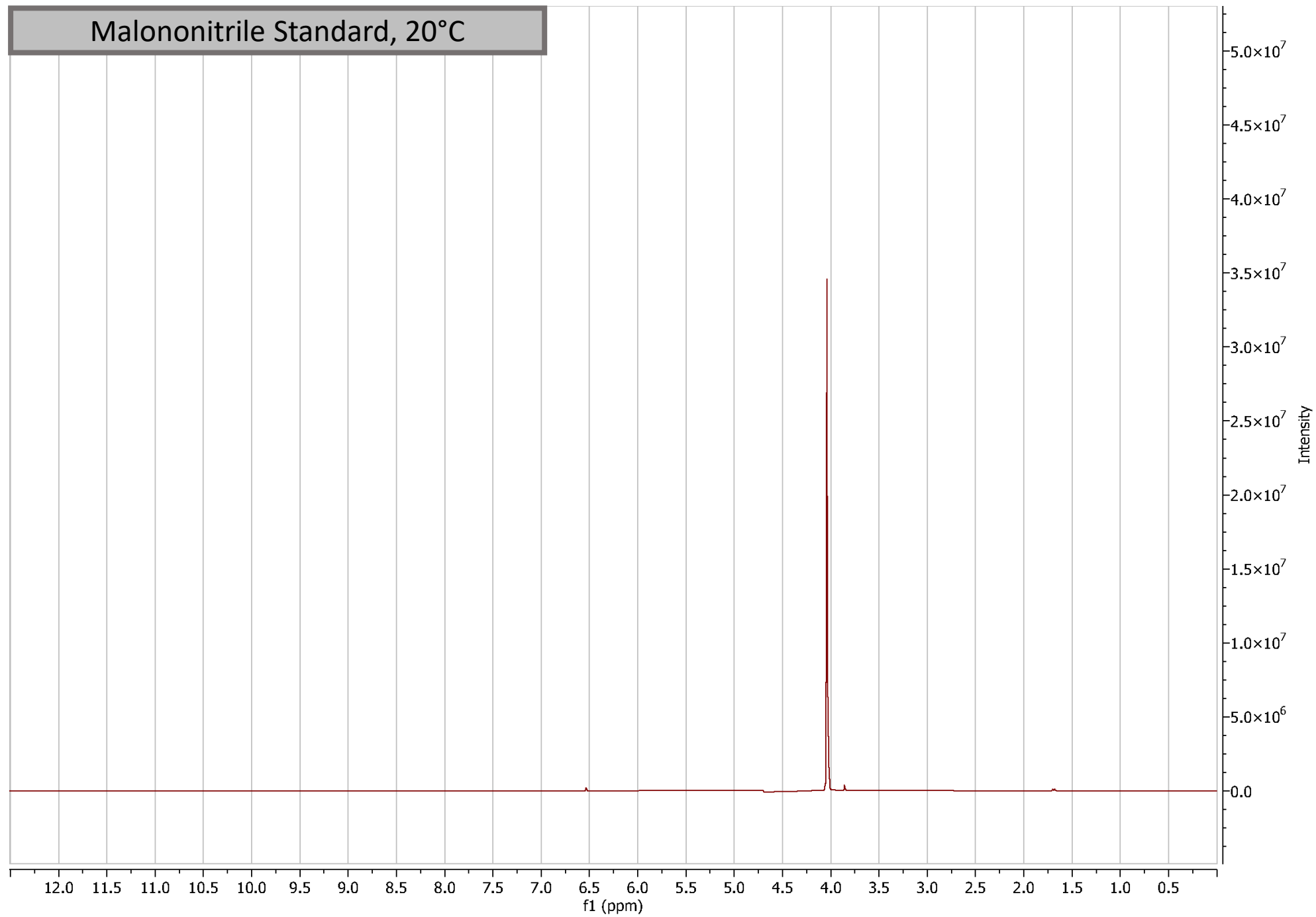
Malonic Acid Standard, 20°C



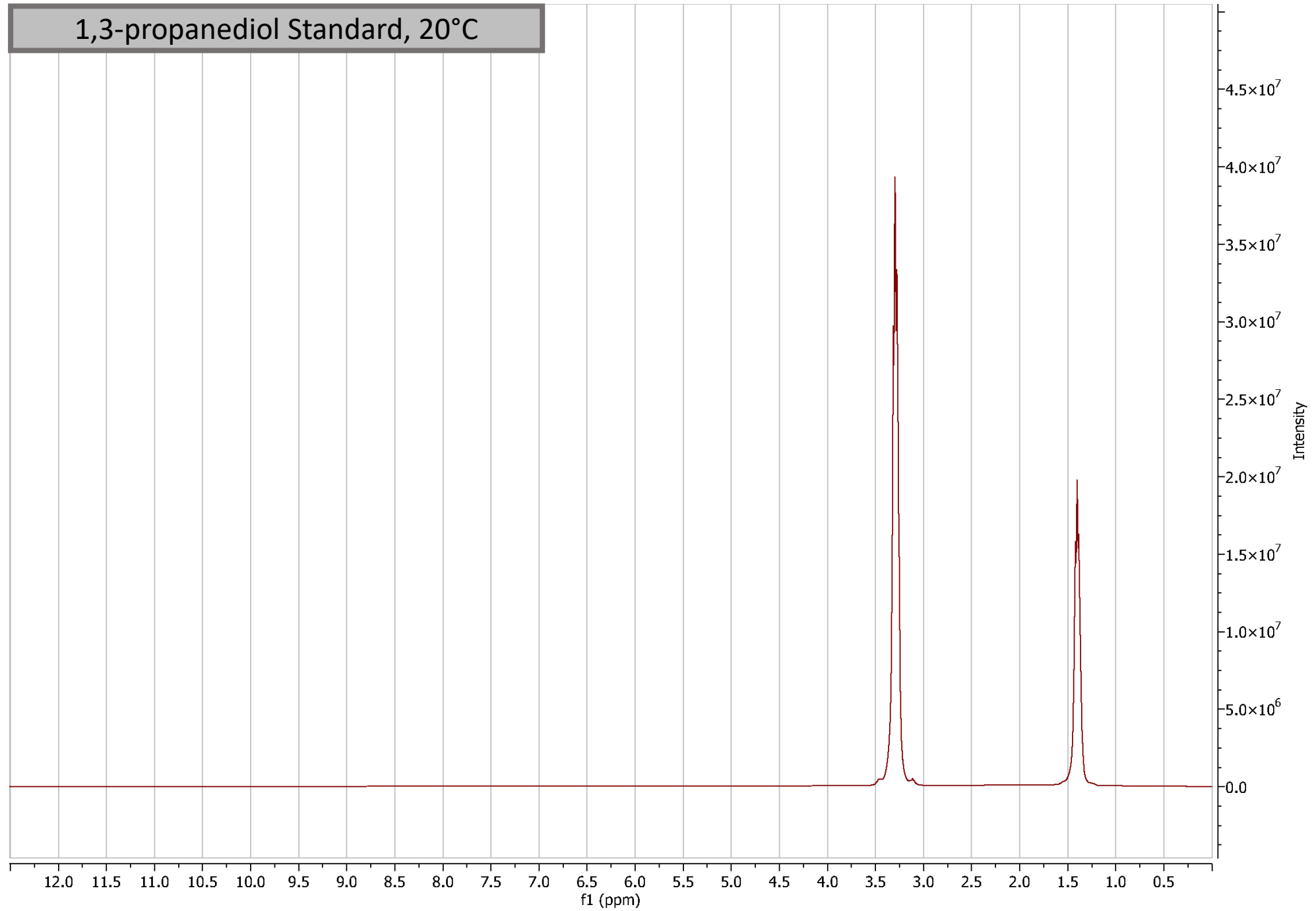
Malonamide Standard, 20°C



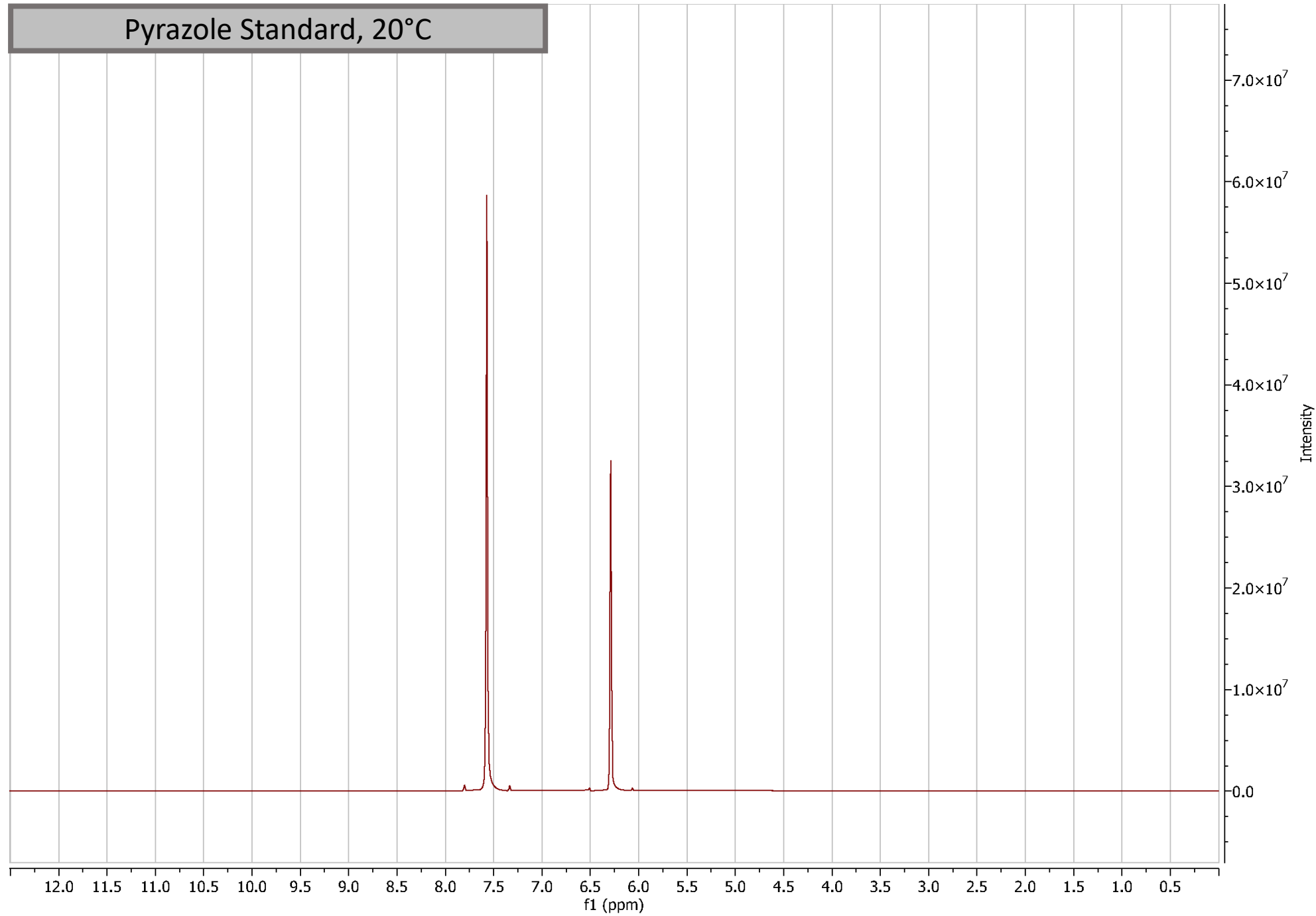
Malononitrile Standard, 20°C



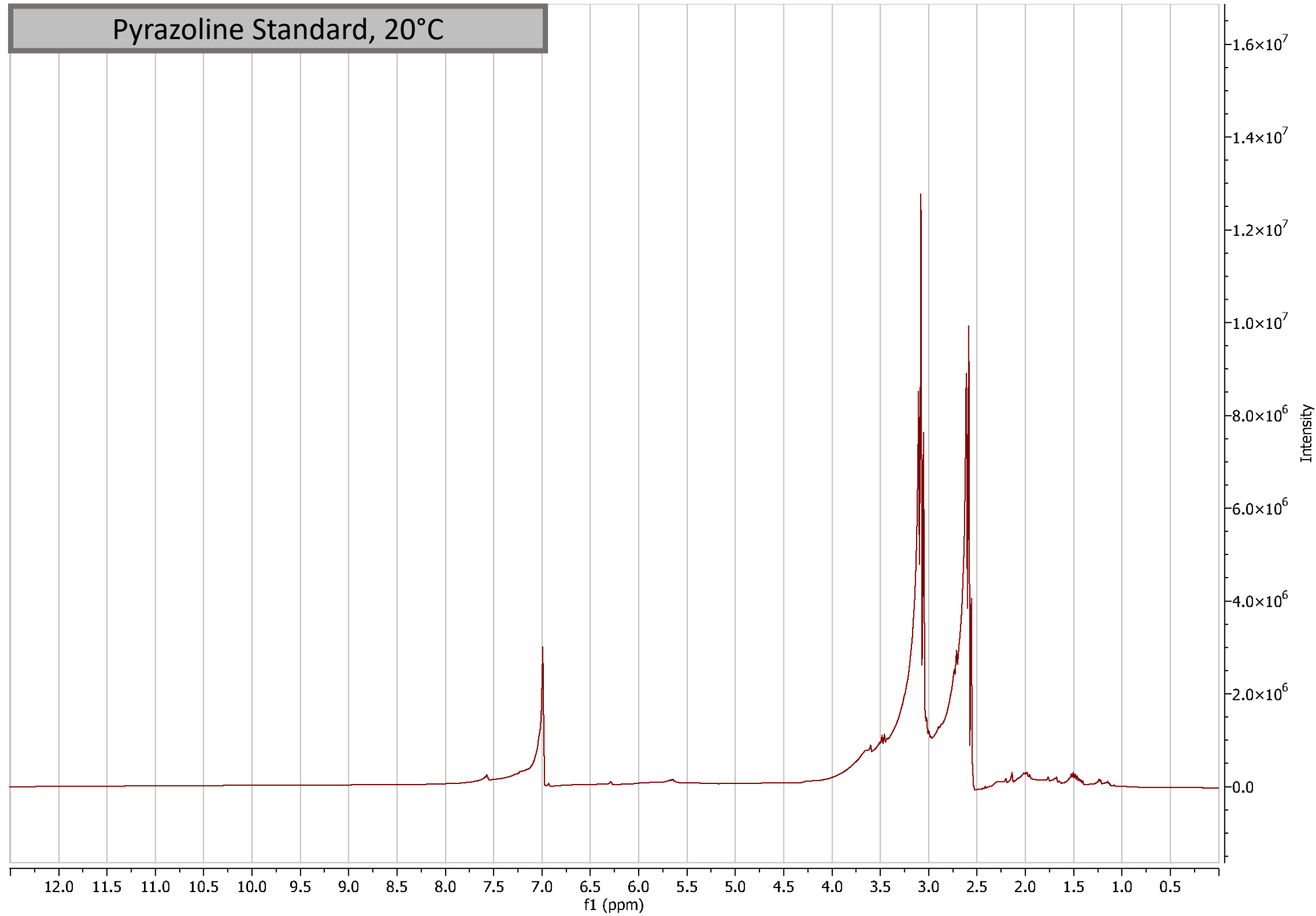
1,3-propanediol Standard, 20°C



Pyrazole Standard, 20°C



Pyrazoline Standard, 20°C



Sodium Formate Standard, 20°C

