

### Chemical Information:

Name: Maleic acid  
CAS No.: 110-16-7  
Tox21\_ID No.: Tox21\_202193  
NTP\_CID No.: 917

Supplier: Sigma-Aldrich  
Lot No.: 098K5421  
MW: 116.07 g/mol

Date of Analysis: 08 May 2009

### Purity and Identity Results:

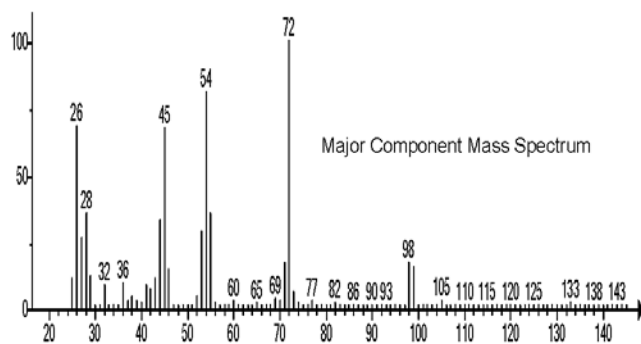
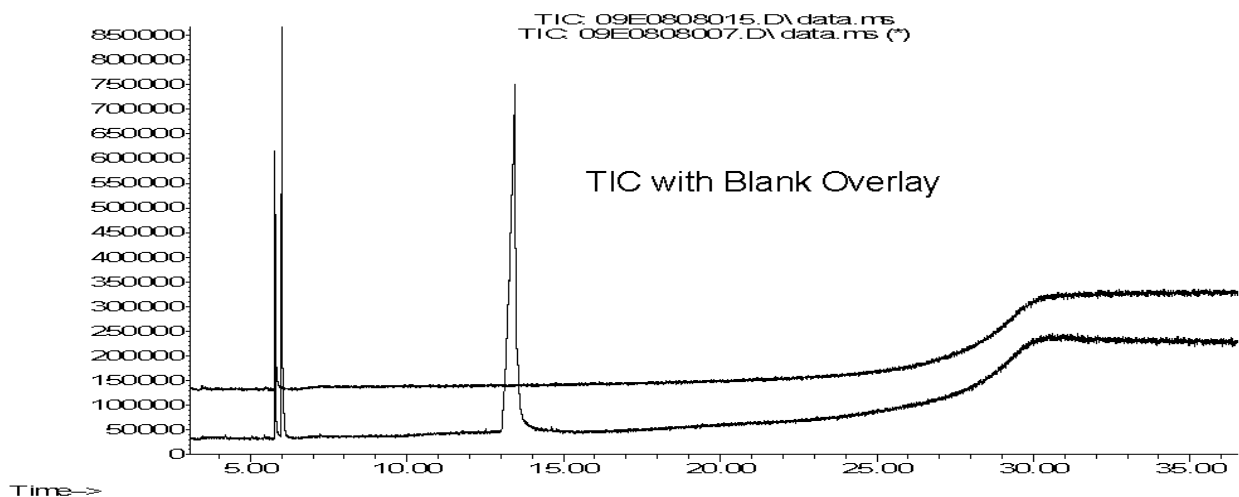
Peak Identity	Retention Time (min)	Purity (% Total Area) <sup>a</sup>
Maleic anhydride	6.00	14.69
Maleic acid	13.45	85.31

<sup>a</sup> Peaks comprising  $\geq 0.5\%$  of total area.

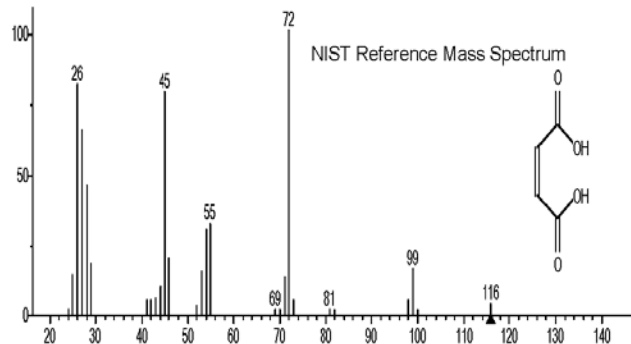
### GC/MS Instrument Parameters:

Instrument / Ionization	Gas Chromatograph with Mass Spectrometer / Electron Impact
Solvent	Acetone (~ 1 mg/mL)
Column	J&W Scientific HP-5MS, 30 m x 0.25 mm ID, 0.25- $\mu$ m film thickness
Carrier Gas	Helium at 1.1 mL/min
Oven Program	35°C, hold 2 min; ramp @ 10°C/min to 310°C, hold 7 min
Source Temperature	230°C
Auxiliary Temperature	250°C
Scan Range	25 – 500 amu
Injector Temperature	250°C
Injection Volume / Mode	1 $\mu$ L / Split (87.1:1)
Run Time	36.5 minutes
Data Analysis Software	MSD Chemstation ver D.03.00.SP1; NIST Library ver 2.0f, build 10/28/2008

Abundance



(-History) Scan 1900 (13.432 min): 09E0808015.D\data.ms



(Z)-2-Butenedioic acid (Z)-