## **Supplementary material & captions:**

**Figure F1:** GC-MS chromatogram of 1,2 dichlorobenzene before ozonation.

Figure F2: GC-FID chromatogram of product mixture.

Figure F3: GC-MS chromatogram of product mixture.

Figure F4: IR spectrum of 3,4 dichloro-5-hydroxy-2(5H)-furanone.

**Figure F5:** <sup>1</sup>H NMR spectrum of 3,4 dichloro-5-hydroxy-2(5H)-furanone.

**Figure F6:** Mass spectrum of 3,4 dichloro-5-hydroxy-2(5H)-furanone.

Figure F7: <sup>1</sup>H NMR spectrum of mucochloric acid

Figure F8: Mass spectrum of mucochloric acid

## Figure S1.: XRD spectra

a & b: 1 % Ni and 5 % Ni on Al<sub>2</sub>O<sub>3</sub> support;

c & d: 1 % Ni and 5 % Ni on SiO<sub>2</sub> support;

**e** & **f**: 1 % Ni and 5 % Ni on TiO<sub>2</sub> support.

Figure F1:

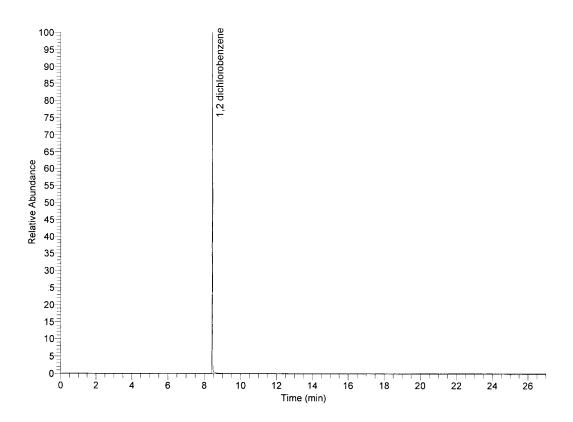


Figure F2:

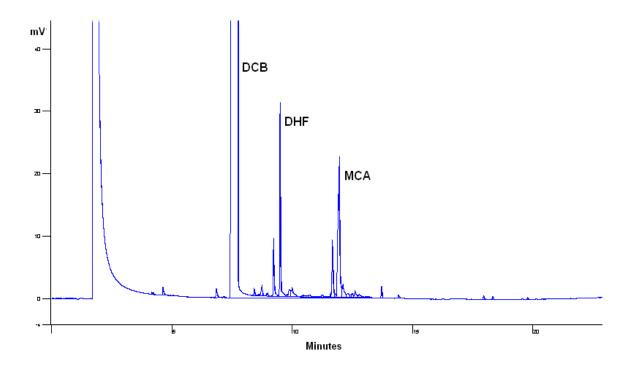


Figure F3:

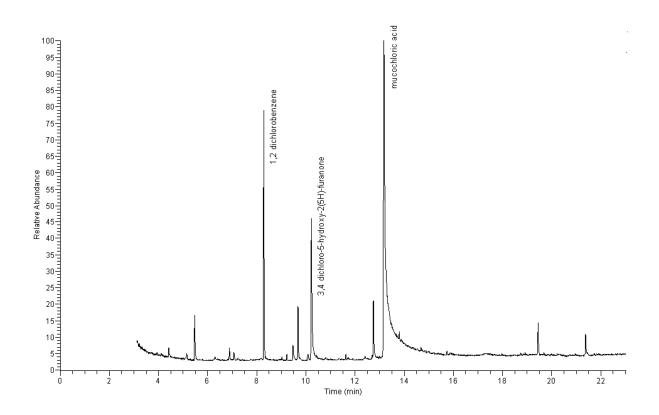
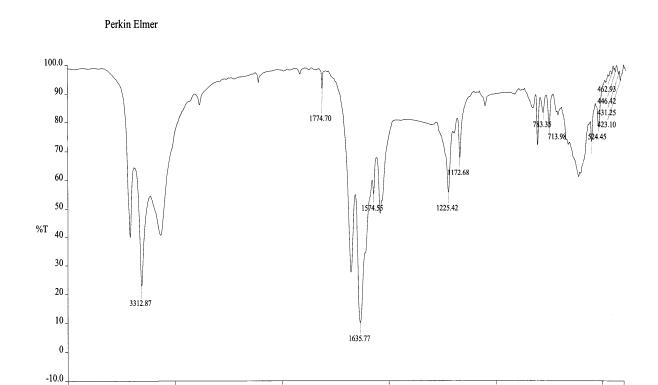


Figure F4:



1500

cm-1

1000

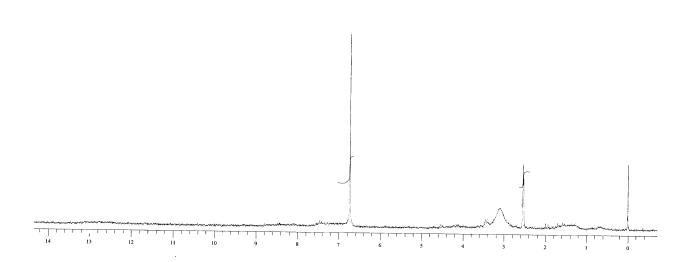
500 400.0

2000

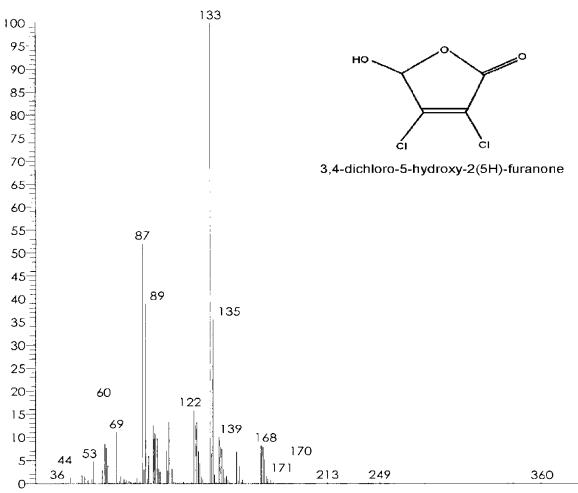
3000

4000.0

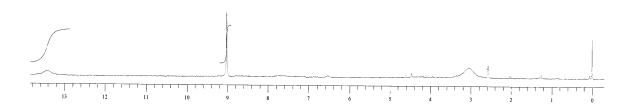
Figure F5:







## Figure F7:



## Figure F8:

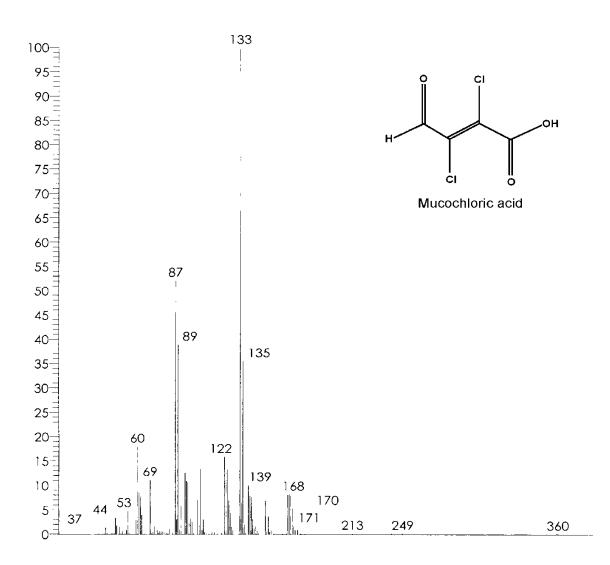


Figure. S1.:

