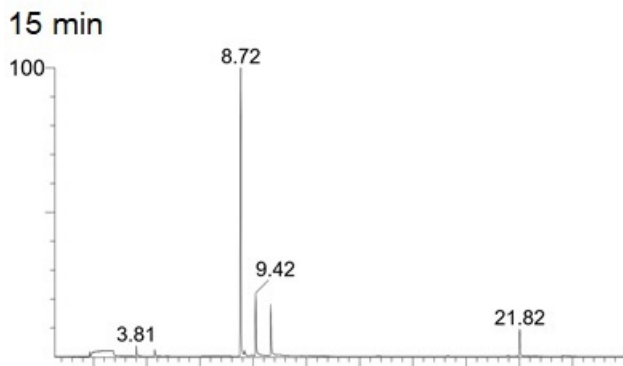
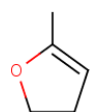
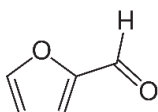
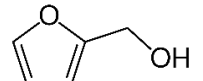
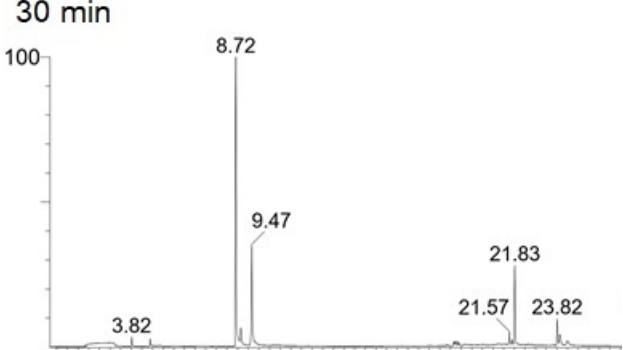
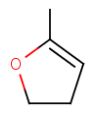
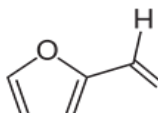
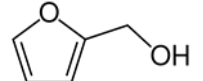
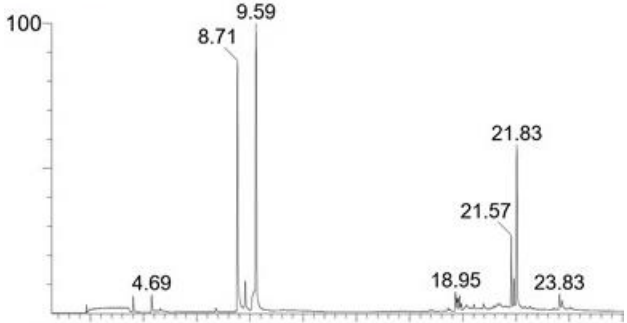
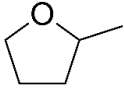
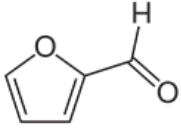
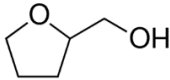
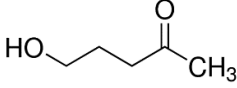
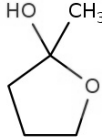
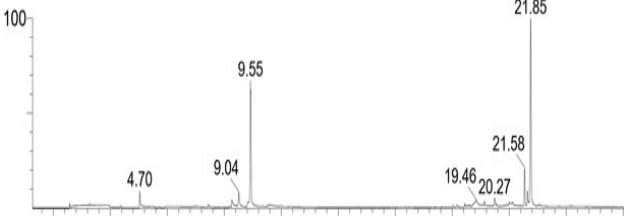
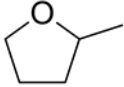
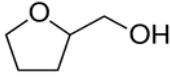
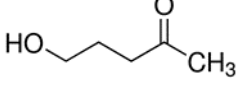
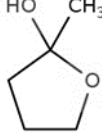


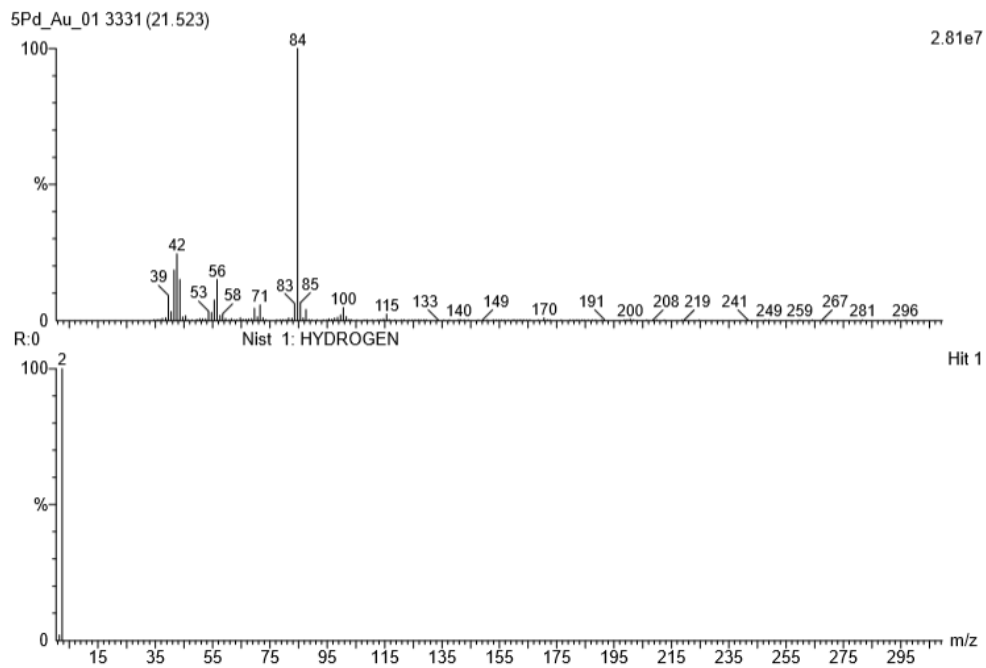
**Table S1.** GC-MS analysis of reaction products.

Reaction time [min] / Chromatogram	Retention time [min] / chemical compound	Retention time [min] / chemical compound	Retention time [min] / chemical compound	Retention time [min] / chemical compound	Retention time [min] / chemical compound
<b>15 min</b> 	3.81  2-Methyl-4 5-dihydrofuran	-	8.72  Furfural	9.42  Furfuryl alcohol	-
<b>30 min</b> 	3.82  2-Methyl-4 5-dihydrofuran	-	8.72  Furfural	9.47  Furfuryl alcohol	-

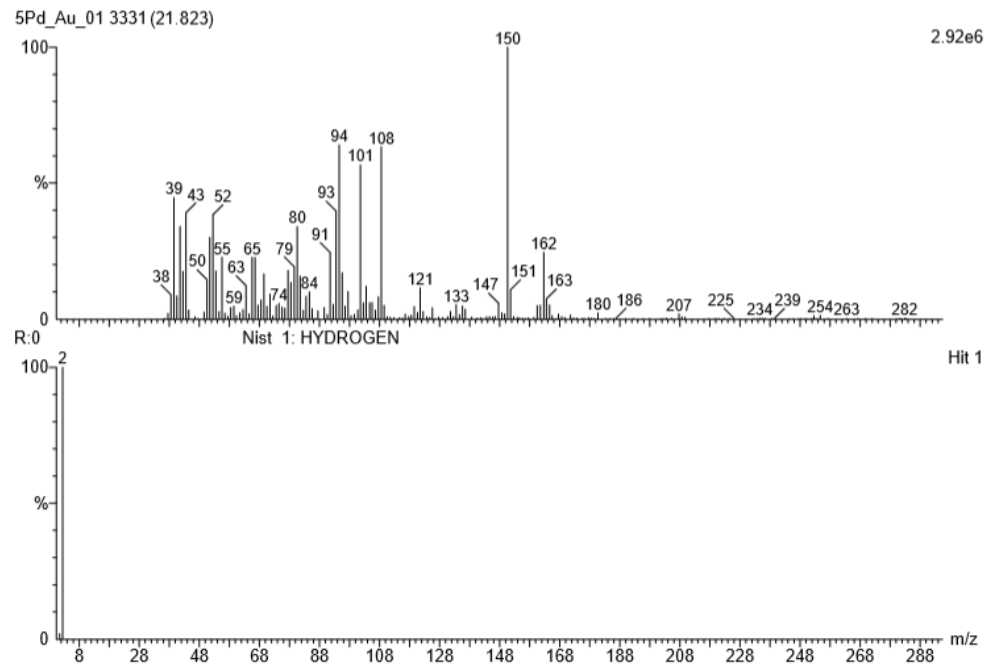
<p>60 min</p> 	-	<p>4.69</p>  <p>2-Methyl-tetrahydrofuran (2-MTHF)</p>	<p>8.71</p>  <p>Furfural</p>	-	<p>9.59</p>  <p>Tetrahydrofurfuryl alcohol</p>  <p>5-Hydroxy-2-pentanone</p>  <p>2-Methyloxolan-2-ol</p>
<p>120 min</p> 	-	<p>4.70</p>  <p>2-Methyl-tetrahydrofuran (2-MTHF)</p>	-	-	<p>9.56</p>  <p>Tetrahydrofurfuryl alcohol</p>  <p>5-Hydroxy-2-pentanone</p>  <p>2-Methyloxolan-2-ol</p>

<p>240 min</p>	-	<p>4.58</p> <p>2-Methyl-tetrahydrofuran (2-MTHF)</p>	-	-	<p>9.59</p> <p>Tetrahydrofurfuryl alcohol</p> <p>5-Hydroxy-2-pentanone</p> <p>2-Methyloxolan-2-ol</p>
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**Table S2.** Mass spectra of products with retention times 21.5(6) and 21.8(2) in the reduction of furfural in water phase over 5%Pd-1%Au/SiO<sub>2</sub> catalyst (after 240 min of reaction run).

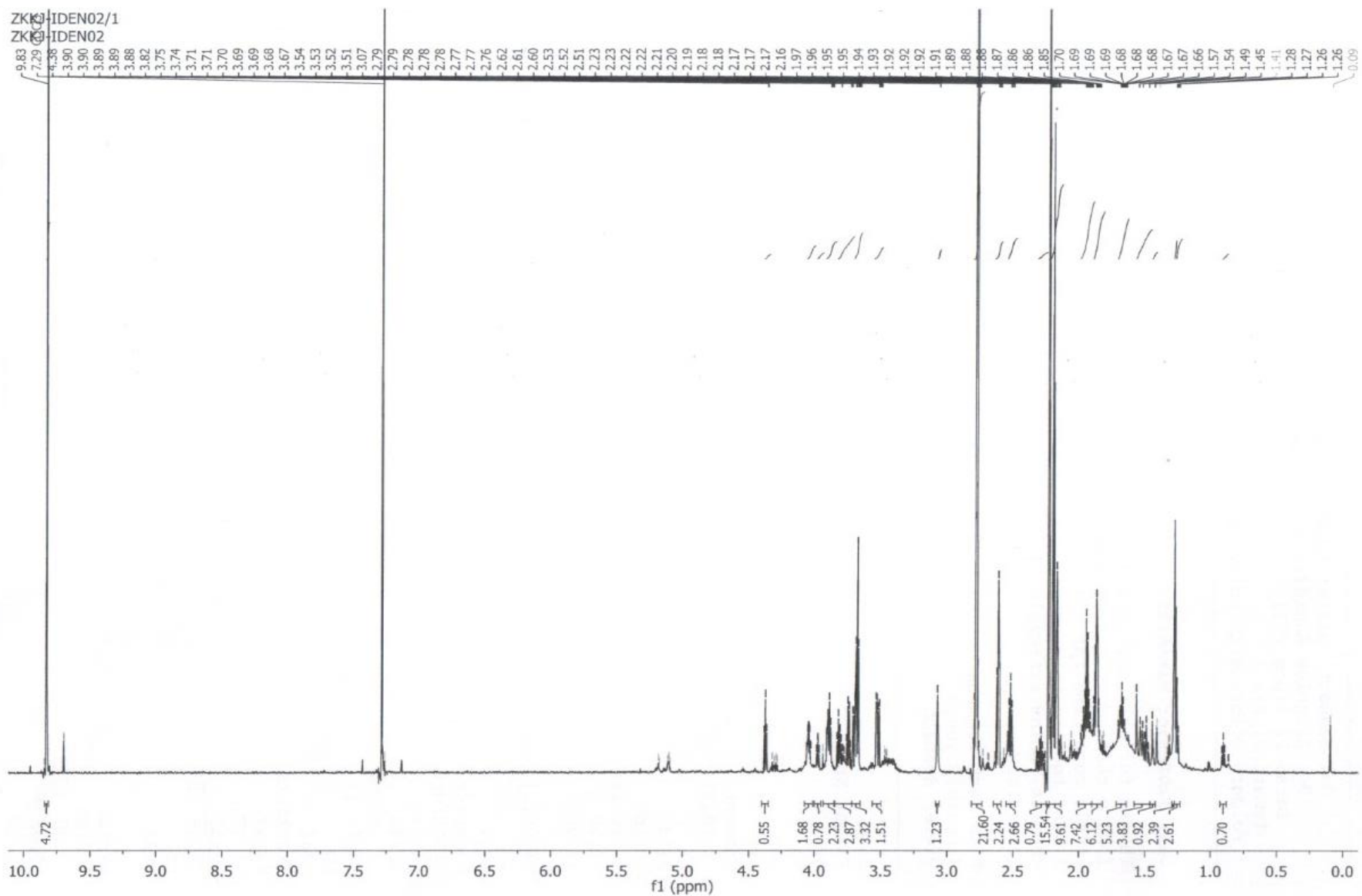


REV	for	Compound Name	M.W.	Formula	CAS
0	0	HYDROGEN	2	H <sub>2</sub>	1333-74-0

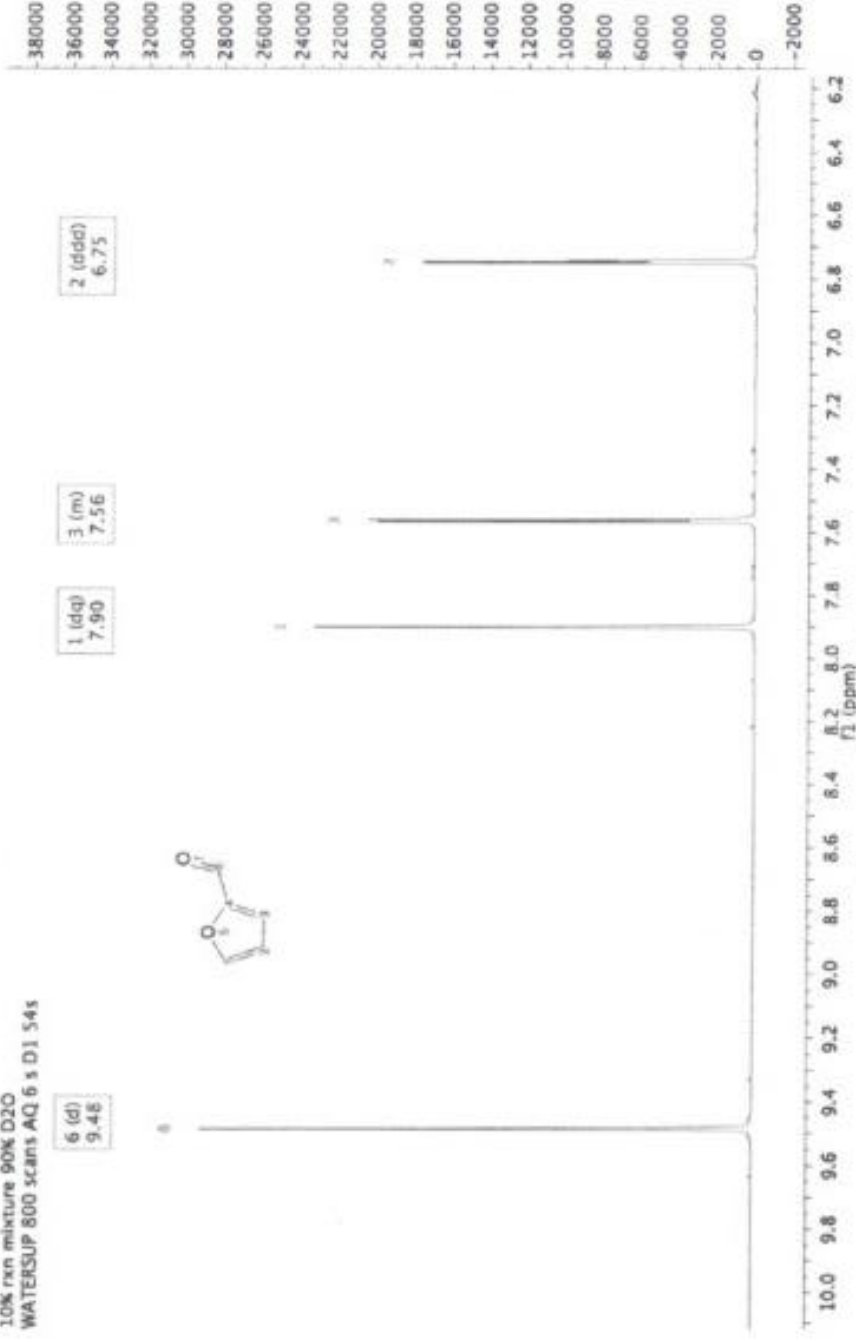


REV	for	Compound Name	M.W.	Formula	CAS
0	0	HYDROGEN	2	H <sub>2</sub>	1333-74-0

Fig.S1. <sup>1</sup>H-NMR spectrum of the sample of reaction mixture extracted to chloroform after 120 min hydrogenation of furfural in water over 5%Pd-1%Au/SiO<sub>2</sub> catalyst.(Obtained on Bruker Spektrometer AVANCE DPX 250 MHz)



1.0% run mixture 90% D2O  
WATERSUP 800 scans AQ.6 s D1.54s



Example  $^1\text{H-NMR}$  spectra of furfural

SciFinder®

<b>Spectrum ID</b> A20804.h
<b>CAS Registry Number</b> 1071-73-4
<b>Formula</b> $\text{C}_5\text{H}_6\text{O}_2$
<b>CAS Index Name</b> 2-Furanone, 3-hydroxy-
<b>Working Frequency</b> 300MHz
<b>Solvent</b> chloroform-d (865-49-6)
<b>Nucleus</b> $^1\text{H}$
<b>Source</b> SciFinder (Spectral data were obtained from Advanced Chemistry Development, Inc.)

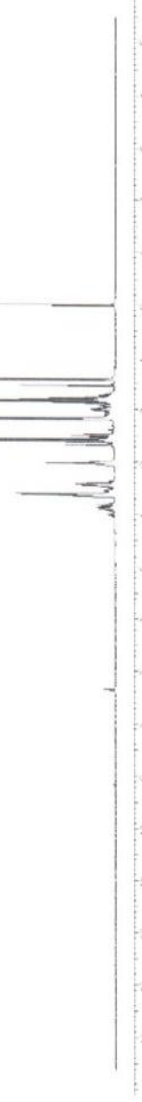
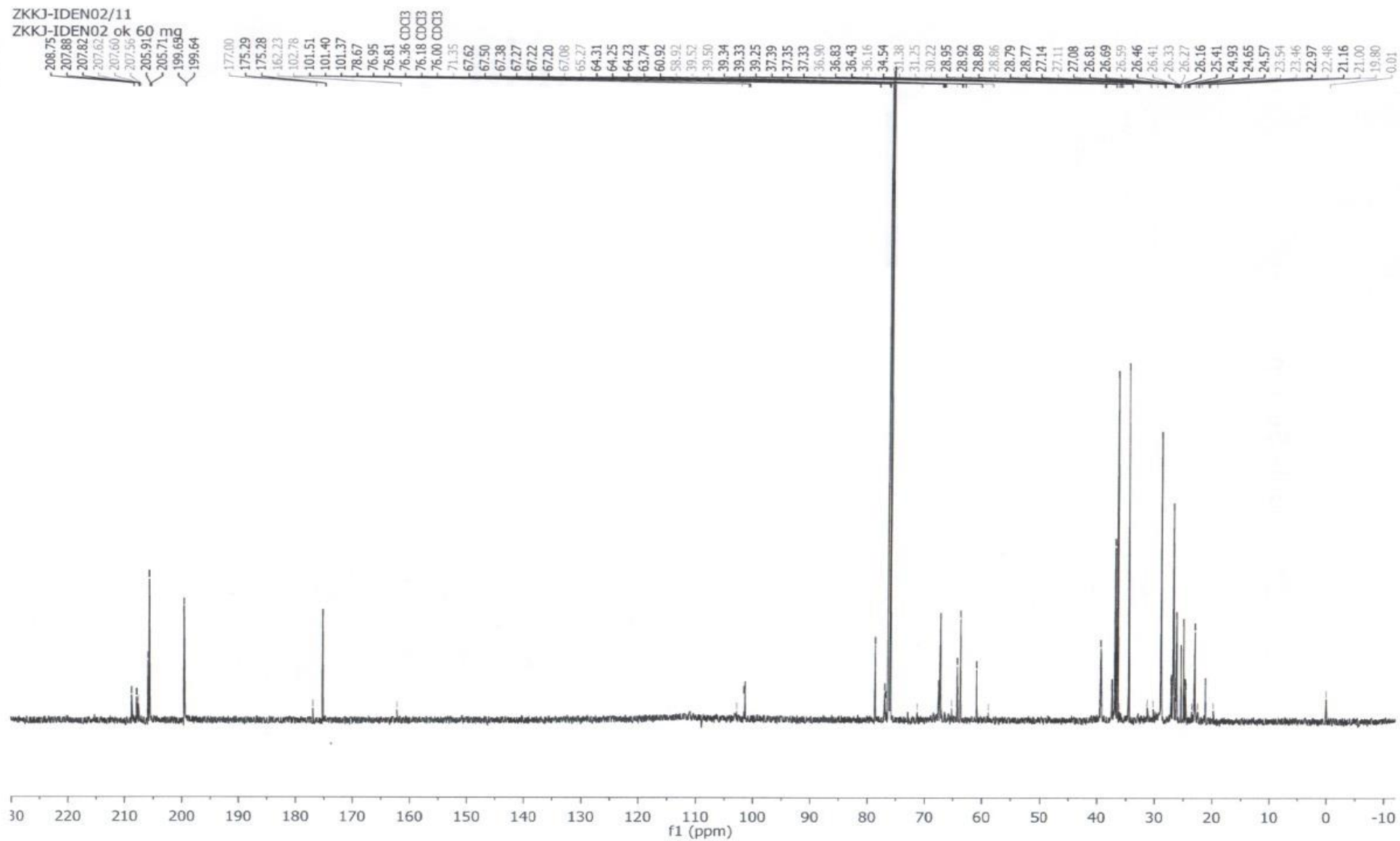
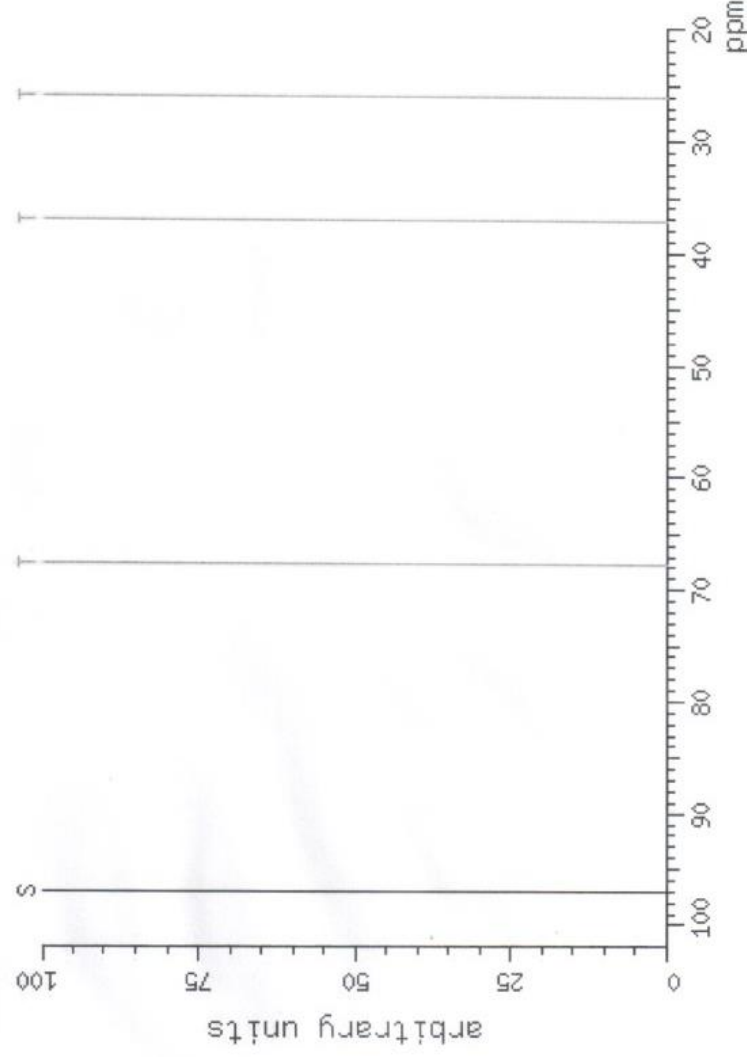


Fig.S2.  $^{13}\text{C}$ -NMR spectrum of the sample of reaction mixture extracted to chloroform after 120 min hydrogenation of furfural in water over 5%Pd-1%Au/ $\text{SiO}_2$  catalyst.(Obtained on Bruker Spektrometer AVANCE DPX 250 MHz)





**Spectrum ID**  
CNMR\_MHKO006324

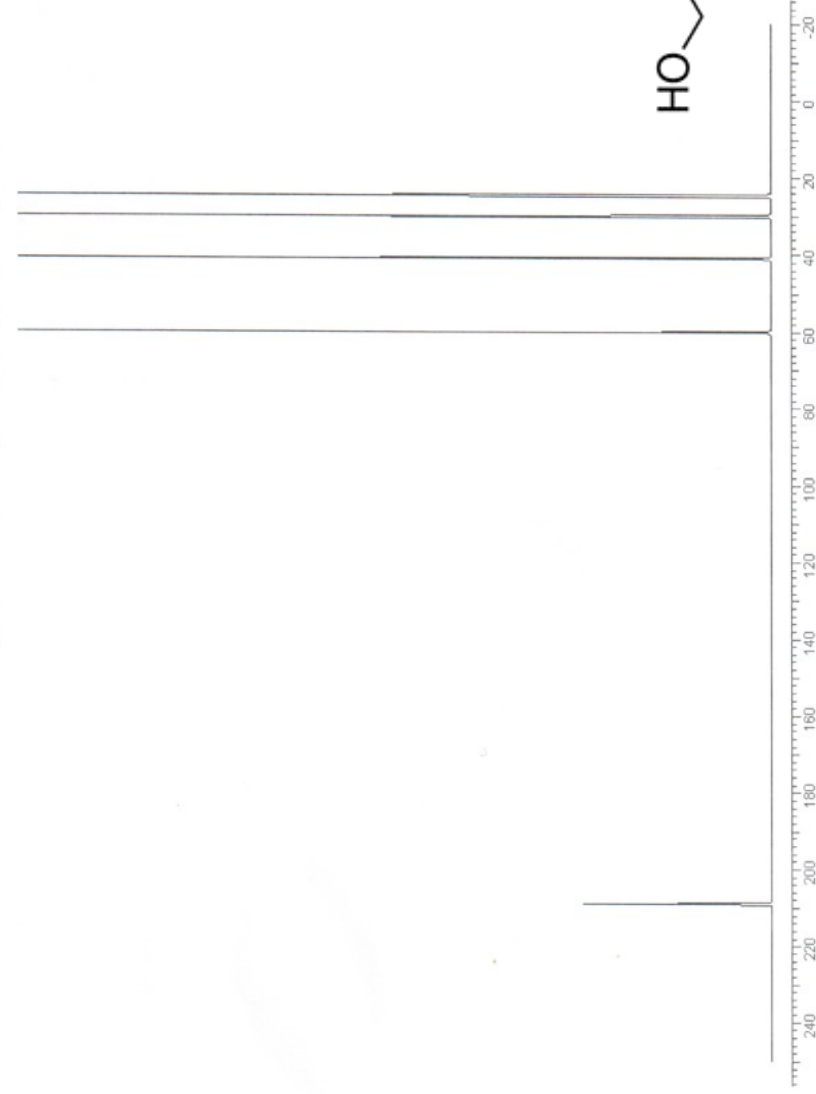
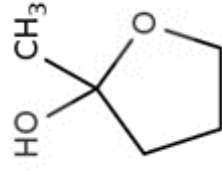
**CAS Registry Number**  
7326-46-7

**Formula**  
C<sub>5</sub>H<sub>10</sub>O<sub>2</sub>

**CAS Index Name**  
2-Furanol, tetrahydro-2-methyl-

**Nucleus**  
13C

**Source**  
Wolfgang Robien / University of Vienna (Spectral Data were obtained from Wiley Subscription Services, Inc. (US))



**Spectrum ID**  
71ZVES01\_110.C

**CAS Registry Number**  
1071-73-4

**Formula**  
C<sub>5</sub>H<sub>10</sub>O<sub>2</sub>

**CAS Index Name**  
2-Pentanone, 5-hydroxy-

**Working Frequency**  
23MHz

**Solvent**  
chloroform-d (865-49-6)

**Nucleus**  
13C

**Source**  
Spectral data were obtained from Advanced Chemistry Development, Inc.

