

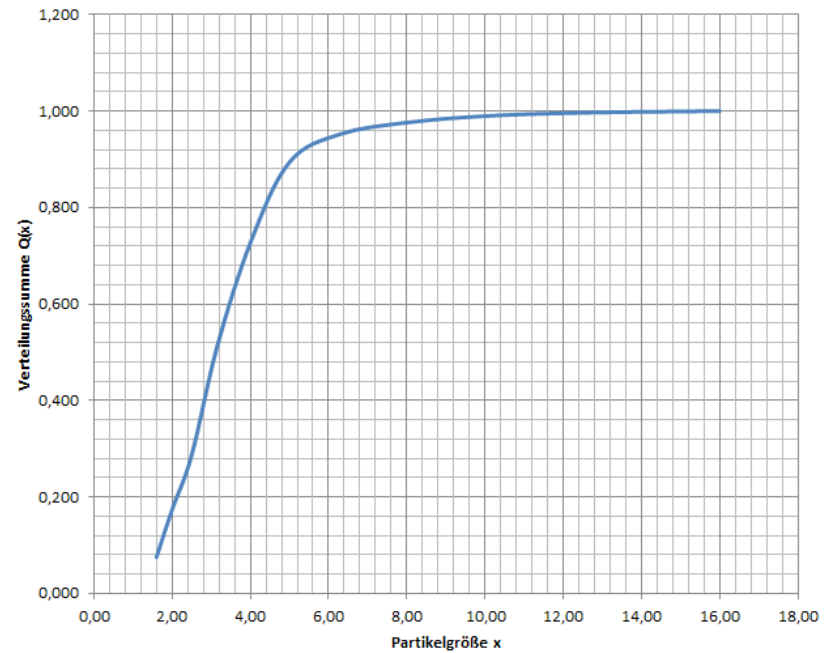
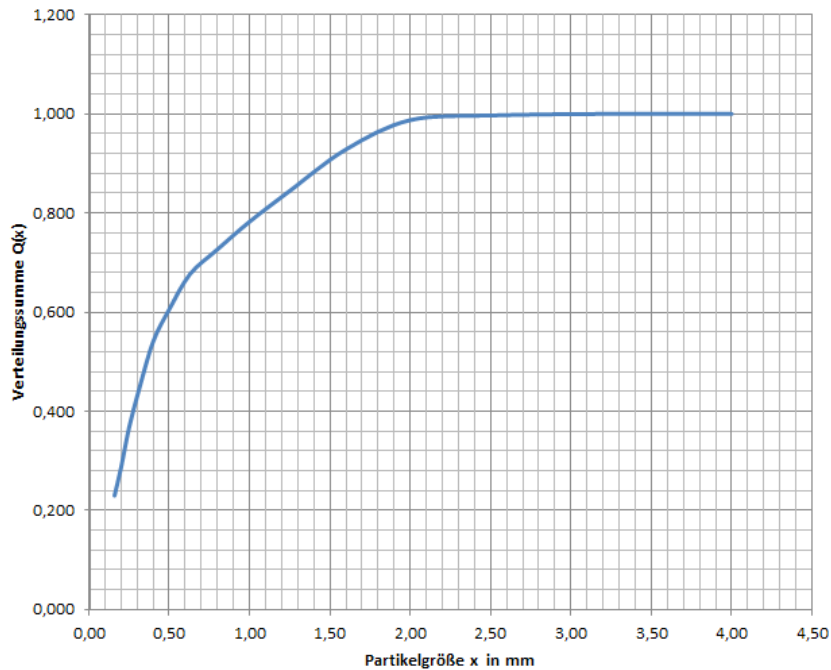
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# **Experimental analysis of the thermo-chemical conversion process of a microgasifier - Sawdust stove**

# Plan

- Defining the initial situation
- Measuring temperatures in the fixed bed
- Taking gas samples from the fixed bed

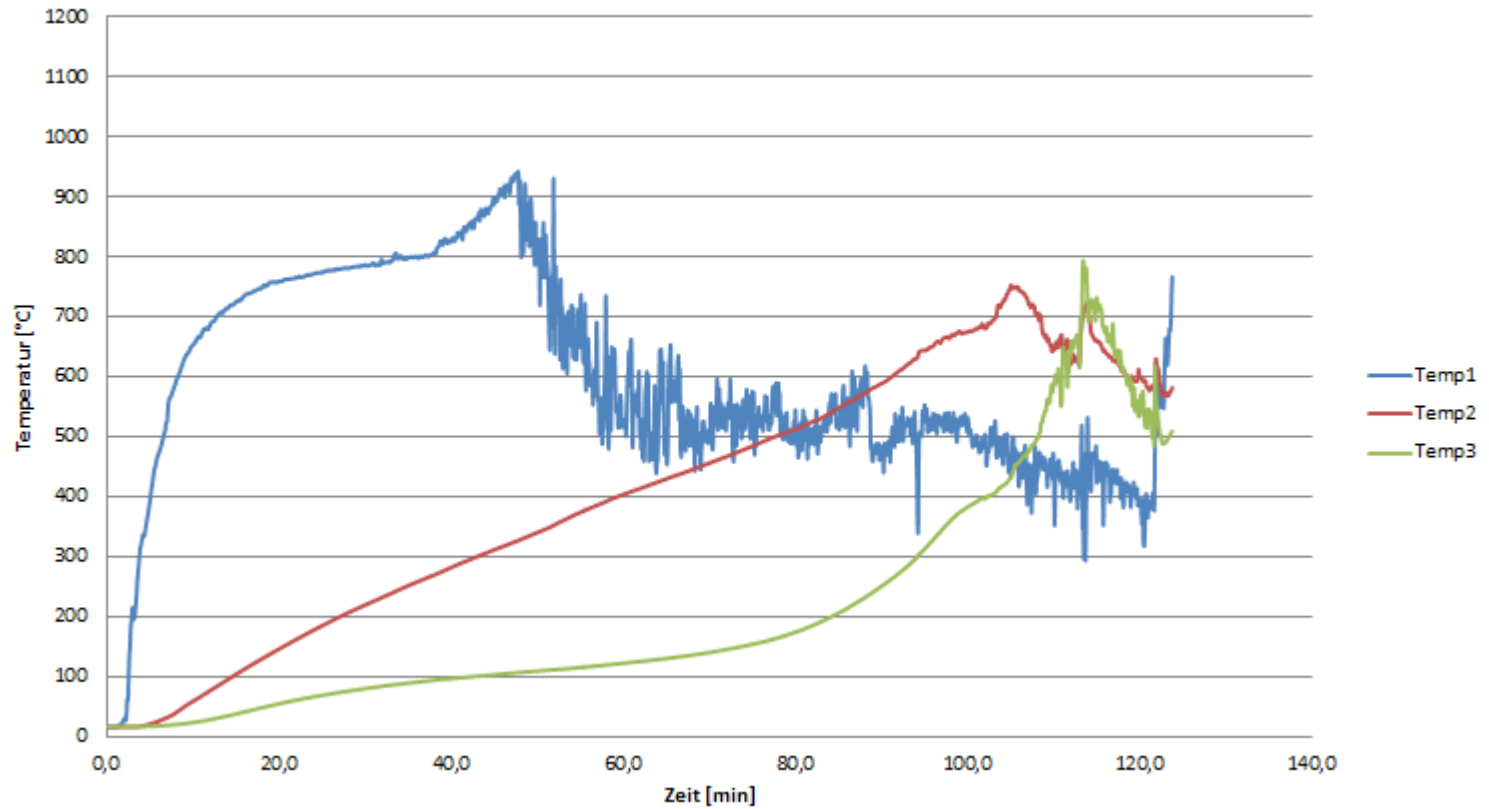
# Particle size distribution



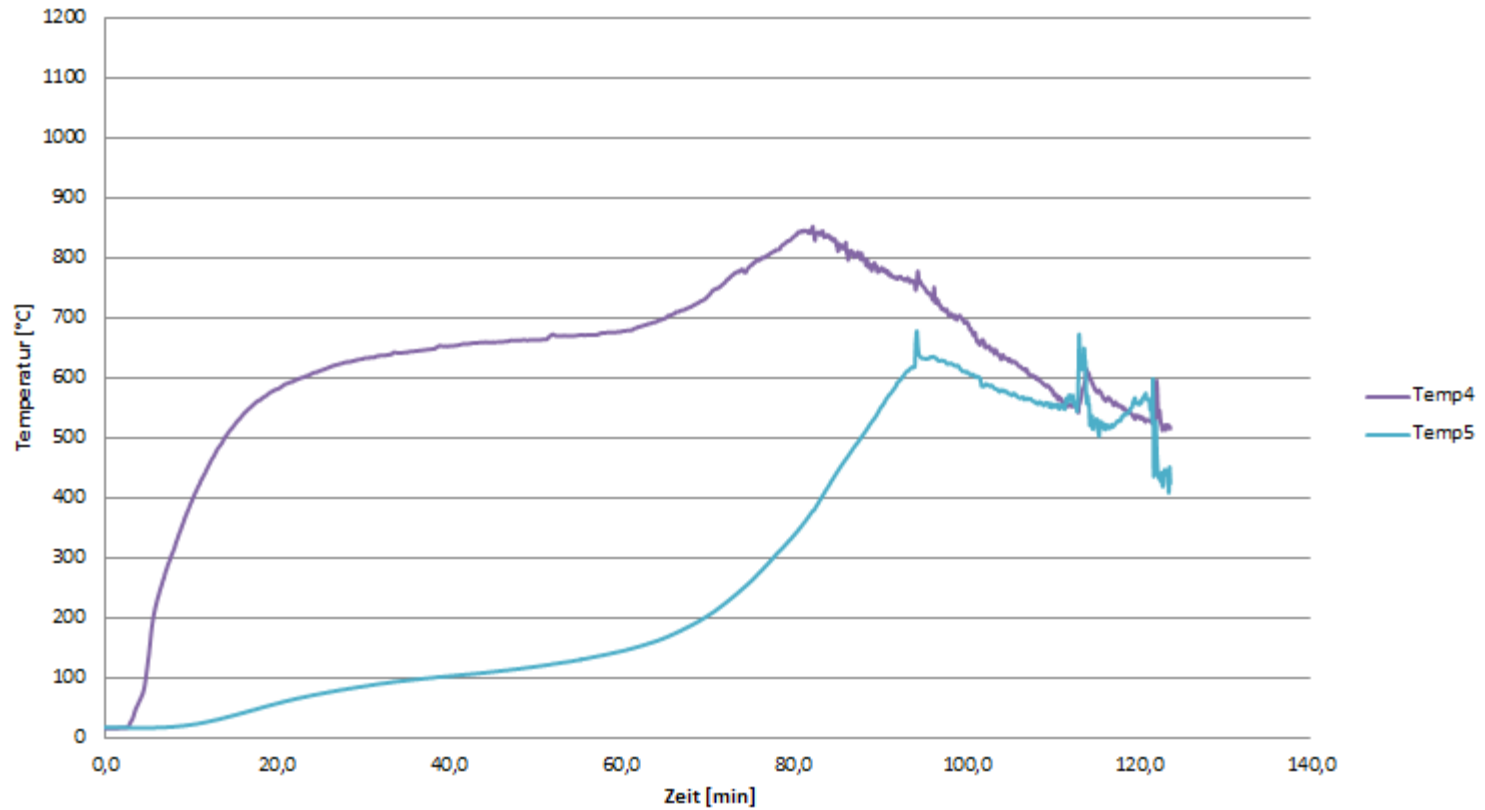
# Run 06.02.13

- Used Wood: sawdust mix
- Mass sawdust: 1854g
- Mass charcoal: 164g
- Duration: 124min

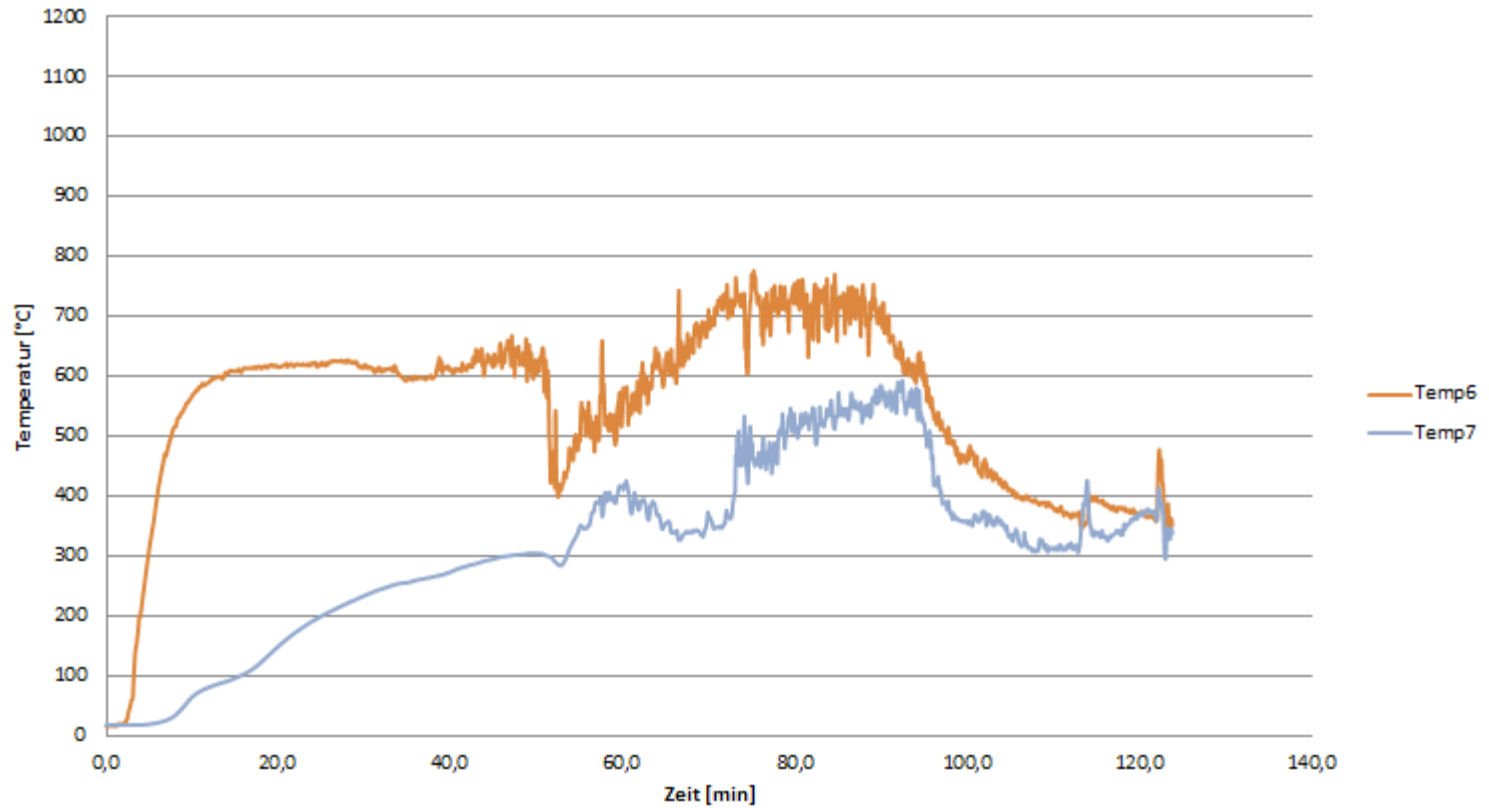
### Radial Niveau 1



### Radial Niveau 2



### Radial Niveau 3

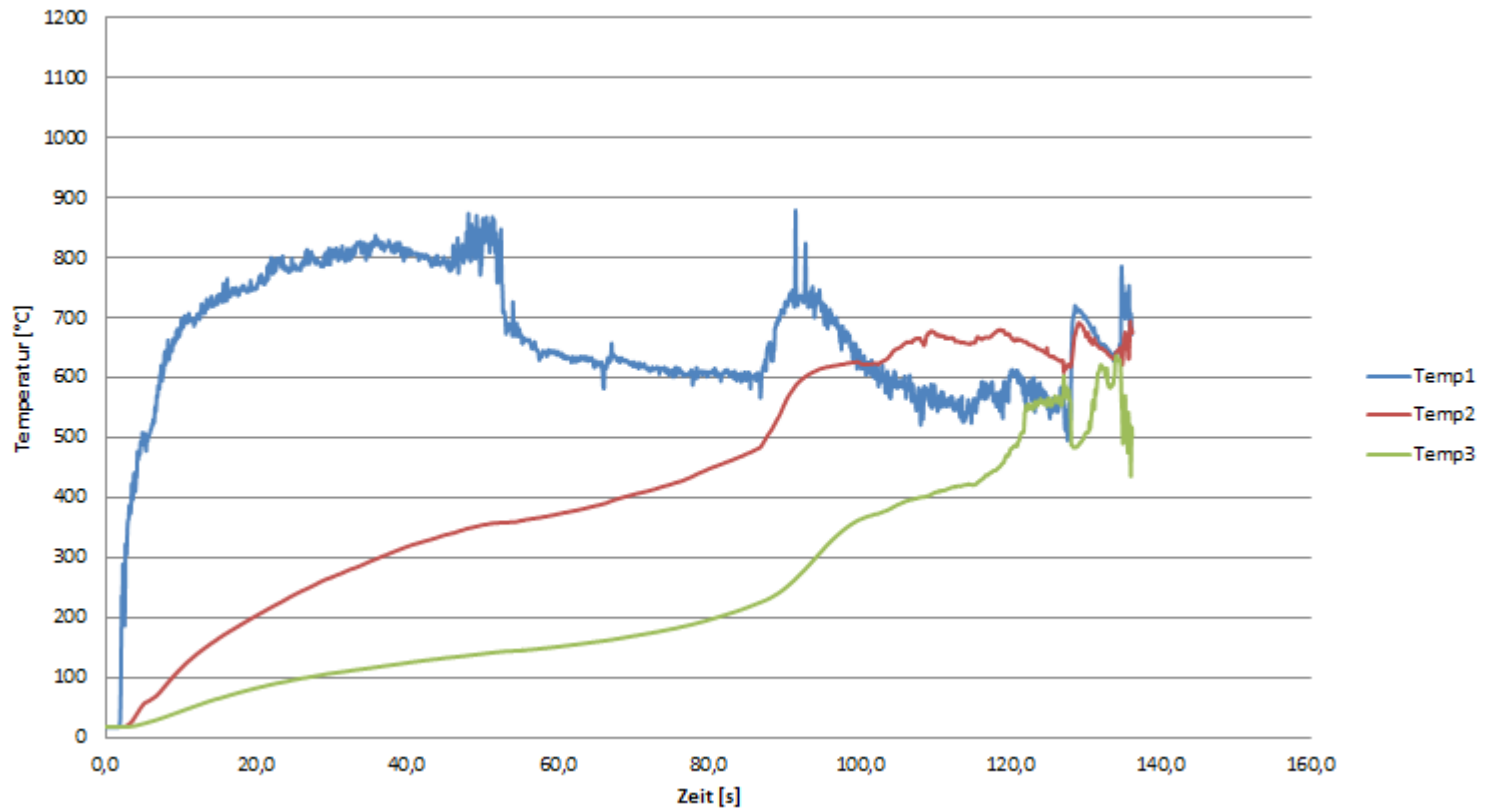


# Run 18.02.13

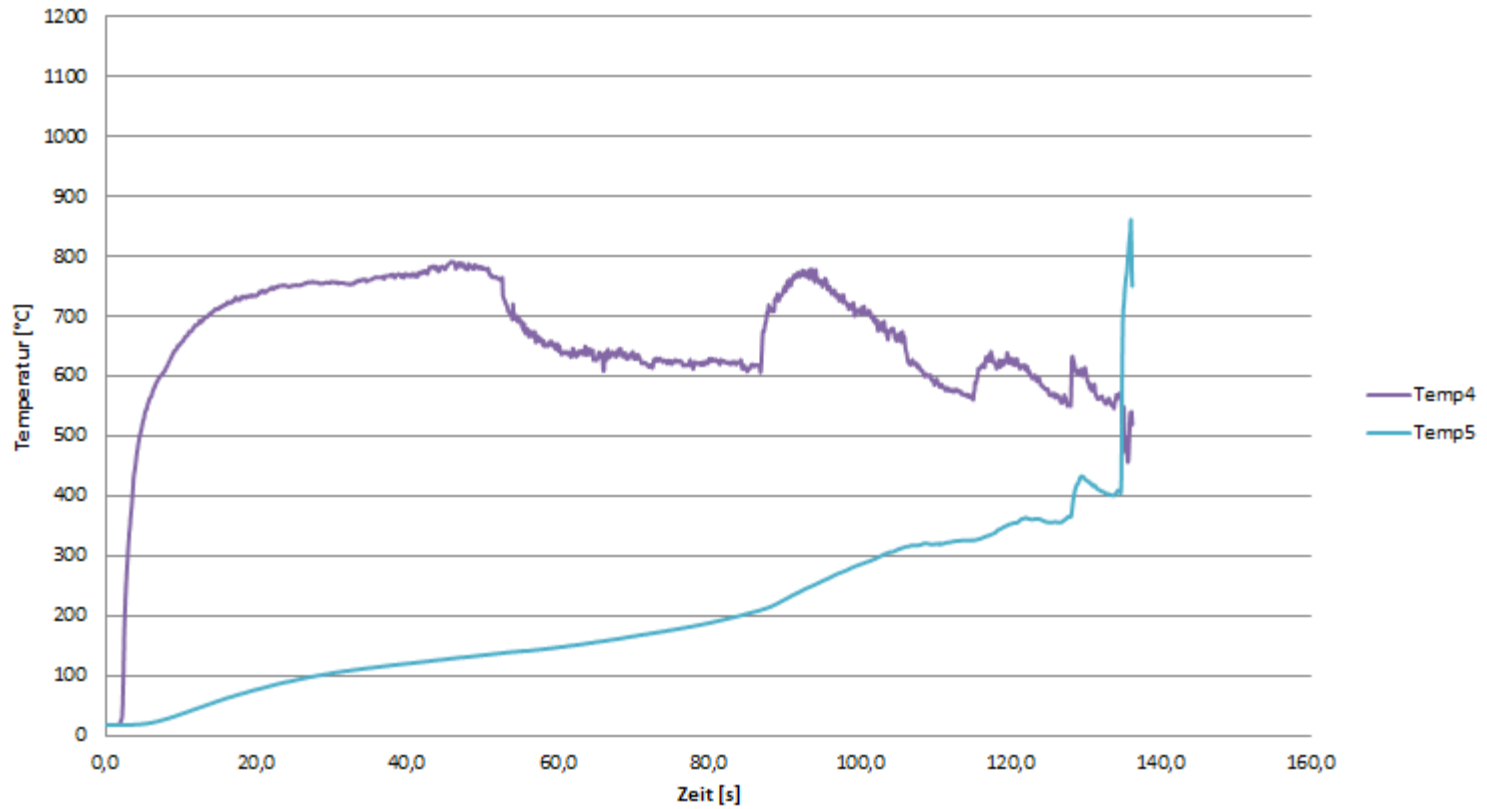
- Used Wood: sawdust - small partice size
- Mass sawdust: 1893g
- Mass charcoal: 129g
- Duration: 135min



### Radial Niveau1



### Radial Niveau2

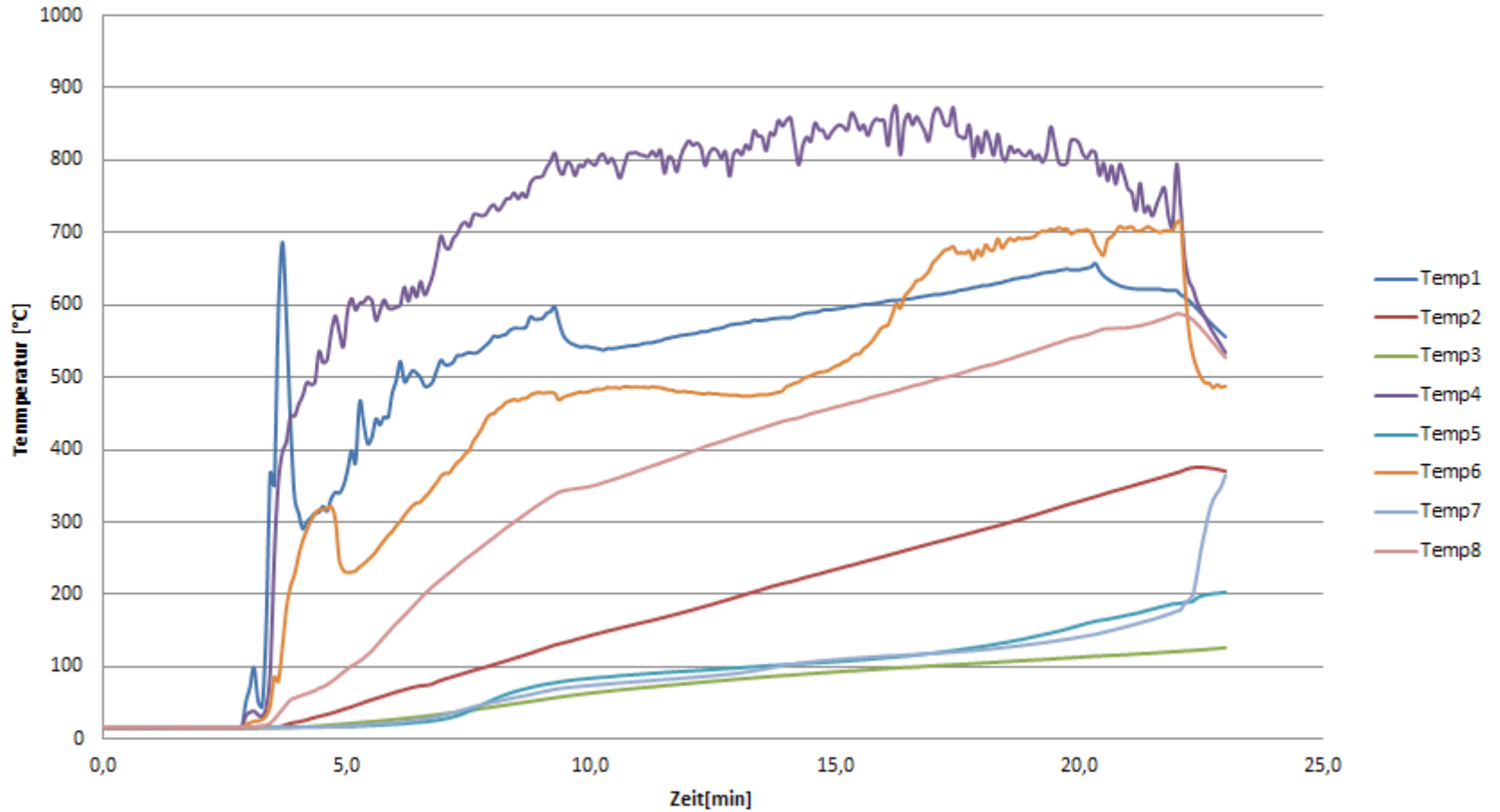


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# Run 19.02.13

- Used Wood: sawdust - big partical size
- Mass sawdust: 1066g
- Duration: 23min

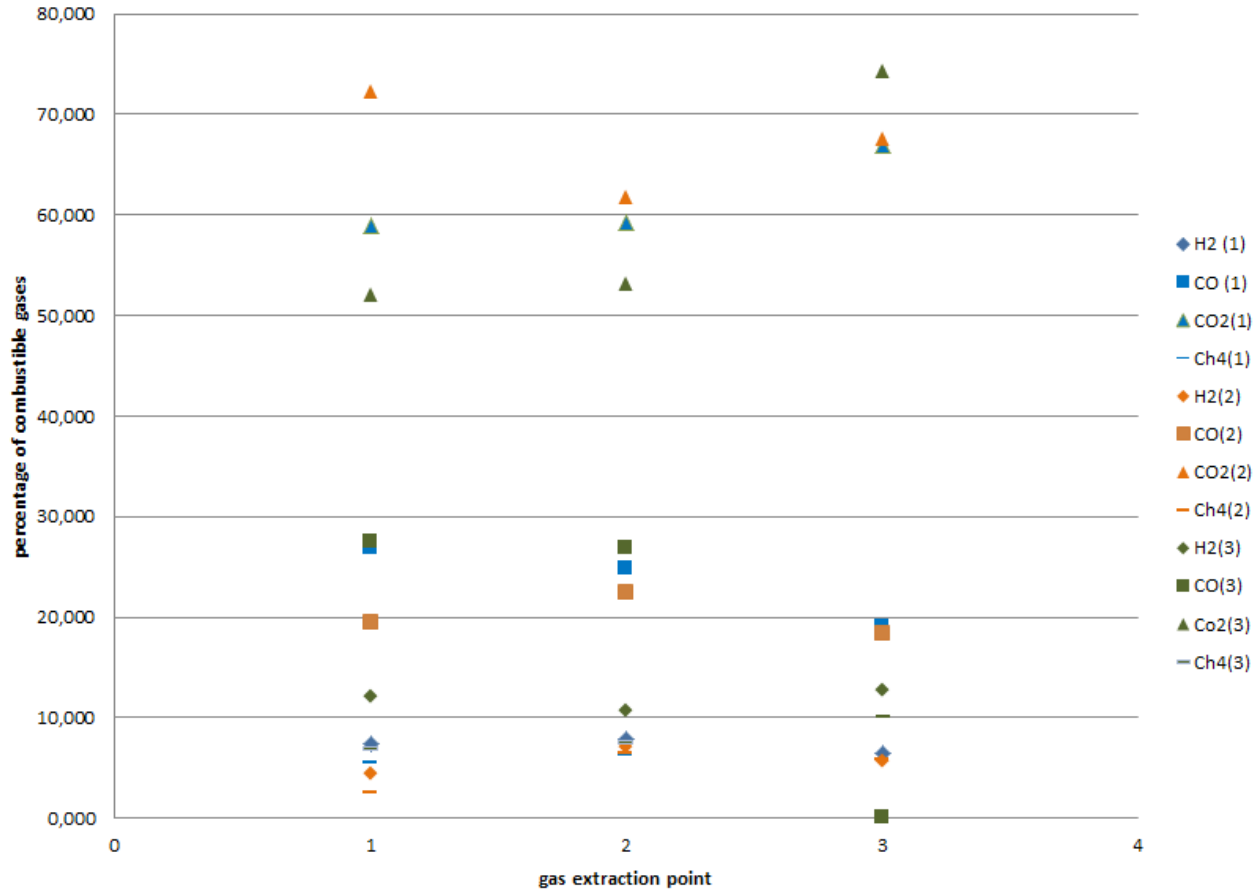
### all temperatures



# Gas samples – sawdust mix

	18.02.2013			21.02.2013			22.02.2013		
	Probe1	Probe2	Probe3	Probe1	Probe2	Probe3	Probe1	Probe2	Probe3
	Normiert %	Normiert %	Normiert %	Normiert %	Normiert %	Normiert %	Normiert %	Normiert %	Normiert %
<b>H<sub>2</sub></b>	0,51	0,59	0,36	0,43	1,21	0,55	1,70	2,10	0,99
<b>O<sub>2</sub></b>	15,98	16,31	17,55	12,09	10,44	16,11	12,16	9,34	19,15
<b>N<sub>2</sub></b>	77,16	76,16	76,87	78,15	72,60	74,19	73,85	71,04	73,12
<b>CO</b>	1,84	1,87	1,06	1,90	3,80	1,79	3,84	5,25	0,00
<b>CO<sub>2</sub></b>	4,05	4,47	3,74	7,06	10,47	6,55	7,29	10,43	5,74
<b>CH<sub>4</sub></b>	0,38	0,48	0,33	0,25	1,10	0,56	0,97	1,49	0,79
<b>C<sub>2</sub>H<sub>4</sub></b>	0,00	0,00	0,00	0,12	0,31	0,20	0,12	0,24	0,15
<b>C<sub>2</sub>H<sub>6</sub></b>	0,09	0,13	0,10	0,00	0,07	0,05	0,07	0,11	0,06
<b>C<sub>3</sub>H<sub>6</sub></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>C<sub>3</sub>H<sub>8</sub></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>C<sub>4</sub>H<sub>8</sub></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>C<sub>4</sub>H<sub>10</sub></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Summe	100,01	100,01	100,01	100,00	100,00	100,00	100,00	100,00	100,00

### gas composition



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# Contact

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