

**Stoichiometric relation between O<sub>2</sub> consumption and C reduction (Oxidation to CO<sub>2</sub>)**

Source: Krogmann 1994; Haug 1980; Bidlingmaier 2001

	Mass						C content	O <sub>2</sub> -consump. per g oTS	O <sub>2</sub> -consumption per g carbon	Relative deviation with respect to the C- content of glucose		C : O <sub>2</sub> ratio		
	C	H	O	N	CHON	C				Glucose		Glucose		
	[g/mol]									[% oTS]	[g O <sub>2</sub> /g oTS]	[g O <sub>2</sub> /g C]		
Mol mass	12	1	16	14	43	12								
<b>Substrate</b>	Number of atoms						[g/mol]							
Glucose	6	12	6	0	180	72	40.0	1,066	2.665	0,00	0,00	0.375	0.999	
Cellulose	6	10	5	0	162	72	44.4	1,185	2.666	0,11	0,00	0.375	1.000	
Protein	16	24	5	4	352	192	54.5	1,498	2.746	0,41	0,03	0.364	1.030	
Fats and oils	50	90	6	0	786	600	76.3	2,825	3.701	1,65	0,39	0.270	1.388	
Sewage sludge 1	22	39	10	1	477	264	55.3	1,742	3.147	0,63	0,18	0.318	1.180	
Sewage sludge 2	10	19	3	1	201	120	59.7	1,987	3.328	0,86	0,25	0.300	1.248	
Household waste 1	64	104	37	1	1478	768	52.0	1,530	2.944	0,44	0,10	0.340	1.104	
Household waste 2	99	148	59	1	2294	1188	51.8	1,474	2.846	0,38	0,07	0.351	1.067	
Wood	295	420	186	1	6950	3540	50.9	1,409	2.766	0,32	0,04	0.361	1.037	
Grass 1	23	28	17	1	590	276	46.8	1,293	2.764	0,21	0,04	0.362	1.037	
Grass 2	20	3	19	1	561	240	42.8	0,599	1.400	-0,44	-0,47	0.714	0.525	
Mixed paper	174	23	177	1	4957	2088	42.1	0,584	1.386	-0,45	-0,48	0.721	0.520	
Kitchen waste (orig. plants)	29	4	22	1	718	348	48.5	0,813	1.677	-0,24	-0,37	0.596	0.629	
Shrubs	21	3	21	1	605	252	41.7	0,555	1.332	-0,48	-0,50	0.751	0.500	
Wood and bark	336	40	282	1	8598	4032	46.9	0,760	1.621	-0,29	-0,39	0.617	0.608	