

# Principales caractéristiques des déchets organiques

Tire de l'article :

Anaerobic digestion of solid wastes needs research to face an increasing Industrial success  
 Pierre Buffière, Liliana Delgadillo Mirquez, Jean Philippe Steyer, Nicolas Bernet, Jean Philippe Delgenes (2008) International journal of Chemical Reactor Engineering, Vol 6 article A94.

Waste type	TS	VS	DCO TKN		Pro	Lip	Sug	HEMI	ADF	BMP		BD
	%fre5h	%TS	gO2/gVS	gN/gVS	g/gVS	g/gVS	g/gVS	g/sVS	g/gVS	ml/gVS	SD	
lettuce	10.9%	80.0%	1.457	0.022	0.199	0.081	0.263	0.155	0.222	293.5	29.7	57.6%
carrots	13.5%	89.9%	1.398	0.02	0.208	0.050	0.472	0.085	0.138	387.4	35.4	79.2%
grass	31.1%	86.0%	3.433	0.026	0.150	0.066	0.263	0.361	0.236	388.0	35.2	77.4%
potatoes	19.0%	93.7%	1.283	0.023	0.090	0.032	0.609	0.295	0.058	386.7	52.2	86.1%
banana	12.8%	88.2%	1.515	0.033	0.102	0.118	0.450	0.133	0.251	291.7	14.4	55.0%
apples	17.1%	97.9%	1.359	0.035	0.123	0.022	0.514	0.029	0.123	316.9	13.7	66.6%
citrus	22.6%	96.4%	1.353	0.040	0.169	0.039	0.468	0.045	0.119	300.9	25.3	63.5%
coffee	24.4%	98.5%	1.519	ND	0.218	0.067	0.311	0.312	0.336	262.6	7.9	49.4%
pasta	28.3%	98.7%	1.209	JND	0.033	0.000	0.274	0.60K	0.015	424.4	37.5	100.3%
rice	33.3%	99.3%	1.192	ND	0.026	0.000	0.211	0.000	0.003	440.0	43.2	105.4%
bread	85.1%	97.0%	1.220	ND	0.010	0.000	0.520	0.000	0.001	355.0	13.8	83.1%
meat	34.0%	97.1%	1.281	0.130	0.815	0.159	0.000	0.517	0.072	449.4	53.1	100.2%
fish	18.3%	92.2%	1.526	0.151	0.944	0.057	0.000	0.987	0.000	358.8	5.2	67.2%
slaughterhouse	17.2%	91.6%	1.403	0.15	0.266	0.237	0.077	0.195	0.180	401.1	2.9	81.7%
office paper	94.7%	81.3%	1.478	0.055	0.003	0.037	0.398	0.072	0.820	351.4	27.6	67.9%
cardboard	94.2%	85.0%	1.367	0.069	0.036	0.077	0.715	0.119	0.803	239.3	R.2	50.1%
MSW1	77.6%	23.8%	1.435	0.025	0.160	0.060	0.317	0.236	0.443	177.5	ND	35.3%
MSW2	52.6%	61.3%	1.351	0.032	0.203	0.083	0.501	0.093	0.535	143.0	ND	30.2%
MSW3	57.3%	60.6%	1.378	0.058	0.361	0.065	0.137	0.127	0.453	158.0	ND	32.8%
MSW4	58.8%	60.0%	1.160	0.040	0.250	0.062	0.365	0.263	0.427	160.0	ND	39.4%
MSW5	40.4%	67.2%	1.475	0.105	0.260	0.175	0.326	0.133	0.521	192.0	ND	37.2%
Digested MSW1	44.6%	29.4%	1.396	0.034	0.213	0.060	0.186	0.185	0.732	65.0	ND	13.3%

HEMI and ADF are the hemicellulose fraction and the acid detergent fibres respectively; the ADF fraction is the residue after digestion with an acid detergent and is assimilated to the lignocellulosic part (Van Soest, 1967).

Avec TS : Matière sèche, VS : Matière volatile, COD : DCO, TKN : Azote Kjeldhal, BMP : potentiel méthane, BD biodégradabilité

La biodégradabilité est calculée de la manière suivante :

$$BD = \frac{BMP(\text{ml de } CH_{4, \text{stp}}/\text{gVS})}{350 \times DCO_{\text{waste}}(\text{g DCO/g VS})}$$