Supplementary Table 1. Composition of hydrolysates used in the present study

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| --- | --- | --- | --- | --- | --- | --- |
| Raw material | Pretreatment | Monosaccharides | Weak acids | Furans | Phenolics | Reference |
| Spruce | Two-stage dilute acid hydrolysis with sulfuric acid as catalysator | 24.3 g/l glucose  12.1 g/l mannose 2.9 g/l galactose  5.6 g/l xylose  1.4 g/l arabinose | 2.0 g/l acetate | 1.9 g/l HMF  0.5 g/l furfural | No information stated | Almeida 2008  <https://doi.org/10.1007/s00253-008-1364-y> |
| Eucalyptus | Hydrothermal | 0.64 g/l glucose 8.85 g/l xylose 0.18 g/l arabinose | 3.11 g/l acetate | 0.33 g/l HMF 1.66 g/l furfural | 2.01 g/l | Cunha 2015 <https://doi.org/10.1016/j.biortech.2015.05.006>  Pereira 2014  https://doi.org/10.1007/s10295-014-1519-z |
| Corn cob | Hydrothermal | 2.6 g/l glucose 26.3 g/l xylose 2.6 g/l arabinose | 4.2 g/l acetate | 0.2 g/l HMF 2.4 g/l furfural |  | Cunha 2015 <https://doi.org/10.1016/j.biortech.2015.05.006>  Romani 2015 <https://doi.org/10.1016/j.biortech.2014.12.020> |
| Corn stover | AFEX-AC\*\* | 355 mM glucose 211 mM xylose | 0.6 mM succinate  1.4 mM lactate  2.8 mM formate  31.4 mM acetate | 1.1 uM HMF  67.2 uM furfural | Long detailed list available | Serate 2015\*  https://doi.org/10.1186/s13068-015-0356-2 |
| Switch grass | AFEX-AC\*\* | 329 mM glucose 208 mM xylose | 0.4 mM Succinate  7.6 mM formate  42.1 mM acetate | 1.1 uM HMF  54.3 uM furfural | Long detailed list available | Serate 2015  https://doi.org/10.1186/s13068-015-0356-2 |
| Rice straw | Hot water treatment | 11.99 g/l glucose 9.66 g/l xylose 2.58 g/l arabinose  0.89 g/l galactose 4.72 g/l fructose | 27.11 mM acetate 20.06 mM formate | 7.77 mM furfural 0.46 mM 5-HMF | 0.56 mM vanillin 0.37 mM syringaldehyde | Fujitomi 2012  https://doi.org/10.1016/j.biortech.2012.01.161 |
| Corn stover | Not stated | 62.55 g/l glucose 23.31 g/l xylose | 3.74 g/l acetate  1.02 g/l formate | 0.33 g/l furfural 0.22 g/l 5-HMF | Not stated | Zhang 2019  <https://doi.org/10.1186/s13068-019-1456-1> |
| Synthetic |  | 1.8 mM mannose 30 mM arabinose  36 mM fructose 4.35 mM galactose  90 mM glucose  45 mM xylose | 6 mM lactate  48 mM acetate  4.2 mM formate |  | Mixture of more than 10 phenolic compounds | Sardi 2016  <https://doi.org/10.1128/AEM.01603-16> |
| Spruce | Steam pretreated with acid catalyst | 2.7 g/l arabinose  3.5 g/l galactose  18.2 g/l glucose  16.3 g/l mannose  12.4 g/l xylose | 4.8 g/l acetate  1.8 g/l formate  0.8 g/l leuvulinic acid | 2.4 g/l furfural  0.2 g/l HMF | Not stated | Wu 2017  <https://doi.org/10.1186/s12934-017-0811-9> |
| Bagasse | Steam pretreated with acid catalyst | 3.1 g/l arabinose  1.6 g/l galactose  10.6 g/l glucose  2.4 g/l mannose  34.6 g/l xylose | 14.0 g/l acetate  0.3 g/l formate  0.5 g/l leuvulinic acid | 8.9 g/l furfural  1.1 g/l HMF | Not stated | Wu 2017  <https://doi.org/10.1186/s12934-017-0811-9> |
| Sugar cane bagasse | Steam pretreated and enzymatically hydrolysed | 12 % sugars | 1.6 g/l acetate | 1.1 g/l furfural | Not stated | Unrean 2017  https://doi.org/10.1007/s00449-016-1725-3 |
| Spruce | Steam-pretreated | Solid fraction:  51.9 g/l glucose  0.3 g/l mannose  0.2 g/l xylose  Liquid fraction:  17.6 g/l glucose  11.6 g/l mannose  5.2 g/l xylose  2.4 g/l galactose  1.6 g/l arabinose | 3.3 g/l acetate  0.1 g/l formate  0.8 g/l leuvulinic acid | 2.3 g/l HMF  1.4 g/l furfural | Not stated | Ask 2013  http://dx.doi.org/10.1186/1475-2859-12-87 |
| Spruce | Steam-pretreated with acid catalyst | 11 g/l glucose  17 g/l mannose  4 g/l galactose  10 g/l xylose | 3.7 g/l acetate | 0.96 g/l HMF  0.78 g/l furfural | Not stated | Wallace-Salinas 2014  https://doi.org/10.1186/s13568-014-0056-5 |
| Spruce | Two-step steam pretreatment with acid catalyst | 1.4 g/l arabinose  2.9 g/l galactose  20.5 g/l glucose  14.9 g/l mannose  7.0 g/l xylose | 2.8 g/l acetate  1.1 g/l leuvulinic acid  0.7 g/l formate | 2.3 g/l HMF  1.4 g/l furfural | 3.0 g/l total phenolic | Larsson 2001  https://doi.org/10.1007/s002530100742 |
| Corn stover | Not stated | 67.56 g/l glucose  28.57 g/l xylose | 0.34 g/l formate  4.33 g/l acetate | 0.53 g/l furfural  0.36 g/l HMF | Not stated | Zhang 2015  <https://doi.org/10.1002/biot.201500508> |
| Paulownia (hardwood) | Hydrothermal | 11.3 g/l xylose | 5.84 g/l acetate | 1.96 g/l furfural  0.72 g/l HMF | Not stated | Cuncha 2018  <https://doi.org/10.1007/s00253-018-8955-z> |

\*contains very detailed mapping of the hydrolysate

\*\* A variant of NAC (non autoclaved) available, compositional analysis is similar