

# Supplementary Information

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## **Economic Process Evaluation and Environmental Life-Cycle Assessment of bio-aromatics production**

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List of files

Supplementary\_1\_Calculations\_results.xlsx – Contains modelling calculations, LCA inventory, and results

Provided on the following website: <https://www.ufz.de/index.php?en=42204>

Supplementary\_2\_reference\_system\_chemical\_synthesis.spf – The SuperPro model of the reference system: the Kolbe-Schmitt reaction

Supplementary\_3\_bacterial\_base\_case.spf – The base scenario of the bacterial process with cane sugar substrate

Supplementary\_4\_bacterial\_base\_case\_biomass\_recycling.spf – The base scenario with biomass recycling with cane sugar substrate

Supplementary\_5\_bacterial\_base\_case\_water\_recycling.spf – The base scenario with water recycling with cane sugar substrate

Supplementary\_6\_bacterial\_best\_case\_cane\_sugar.spf – The base scenario with both water and biomass recycling and with cane sugar substrate

Supplementary\_7\_bacterial\_best\_case\_cane\_sugar\_upscaled.spf – The base scenario with both water and biomass recycling and with cane sugar substrate and with fivefold of base production

Supplementary\_8\_bacterial\_best\_case\_beet\_sugar\_upscaled.spf – The base scenario with both water and biomass recycling and with beet sugar substrate and with fivefold of base production

Supplementary\_9\_yeast\_base\_case.spf – The base scenario with yeast

Supplementary\_10\_yeast\_best\_case\_cane\_sugar\_upscaled.spf – The base scenario with yeast with both water and biomass recycling and with cane sugar substrate and with fivefold of base production

Supplementary\_11\_yeast\_best\_case\_beet\_sugar\_upscaled.spf – – The base scenario with both water and biomass recycling and with beet sugar substrate and with fivefold of base production