

## List of substituting of materials in multioutput processes defined by TfS

| Author(s)                | Multioutput<br>Products<br>substituted                                   | Product system   | Year<br>of<br>listing | Source  |
|--------------------------|--|--|-----------------------|---|
| Contreras,<br>A.M. et al | Alternatives<br>for using by-<br>products of<br>cane sugar<br>production | Sugar and Molasses production  use of wastewater, filter cake and ashes for the substitution of synthetic fertilizers  1 kg of filter cake is replaced by 0.1 kg NPK fertilizers | 2024                  | Contreras, A.M., Rosa, E., P´erez, M., Van Langenhove, H., Dewulf, J., 2009. Comparative Life Cycle Assessment of four alternatives for using by-products of cane sugar production. J. Clean. Prod. 17 (8), 772–779. https://doi.org/10.1016/j.jclepro.2008.12.001. |