



# BioMates

Mapping of samples – Deliverables in WP1: Novel pyrolysis oil from non-food/feed biomass

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## 1. Introduction

In the H2020-project BioMates ([www.biomates.eu](http://www.biomates.eu), see chapter 4 “Funding and disclaimer”), Fraunhofer UMSICHT produced samples from ablative fast pyrolysis of herbaceous biomass in a TRL 4-plant. A dedicated document provides identifiers for relevant liquid samples and their blends [1]. The document at hand maps it to the substances reported to be used in the deliverables connected to Work Package 1 “Novel pyrolysis oil from non-food/feed biomass” of the BioMates-project.

## 2. Original documents

This mapping-document refers to the following documents:

- BioMates Deliverable D 1.1 - Straight-run AFP products from straw & miscanthus, Version 01, submitted 29/05/2017 - <https://s.fhg.de/BioMates-Cordis-D01-01>
- BioMates Deliverable D 1.2 - Advanced-AFP products from straw & miscanthus, Version 02, submitted 30/05/2018 - <https://s.fhg.de/BioMates-Cordis-D01-02>
- BioMates Deliverable D 1.3 - Advanced-AFP product after WP4+6-feedback, Version 01, submitted 19/12/2018 - <https://s.fhg.de/BioMates-Cordis-D01-03>
- BioMates Deliverable D 1.4 - Report on analytics of feedstocks, in-line catalysts and AFP bio-oils, Version 01, submitted 11/10/2018 - <https://s.fhg.de/BioMates-Cordis-D01-04>
- BioMates Deliverable D 1.5 - Report on evaluation of by-product utilisation pathways (public summary), Version 01, submitted 17/12/2018
- BioMates – WP1 - Identifiers of bio-oil samples and blends [1]
- BioMates Data Management Plan – Level 2: Coding of identifiers for WP1-samples and -blends [2]

All given identifiers are listed in [1]. Document [2] provides further reading on how to decode the identifiers. Internet-sources for BioMates-deliverables are given on the cover page.

## 3. Mapping of samples

### 3.1. Deliverable D 1.1

The straw-based bio-oil (also called “tarry-phase products” or “tarry liquid products”) discussed in chapter 6 “Straw-based pyrolysis products” and table 6 is referred to as BM-FH-00BB9.

The Miscanthus-based bio-oil (also called “tarry-phase products”, “tarry liquid products” or “tarry phase total condensate”) referred to in chapter 7 “Miscanthus-based pyrolysis products” and table 5 is referred to as BM-FH-080E9.

The identifiers of the total condensate (like described before) and the tarry-phase products of staged condensation (1<sup>st</sup> stage) are listed in Table 1.

**Table 1:** Identifiers of Miscanthus-based tarry-phase products in D1.1/Table 5

Sample description	Identifier
Tarry phase total condensate	BM-FH-080E9
Staged condensate (100 °C)	BM-FH-7ACD9
Staged condensate (80 °C)	BM-FH-785C9
Staged condensate (70 °C)	BM-FH-900B1
Staged condensate (60 °C)	BM-FH-75EB9
Staged condensate (40 °C)	BM-FH-8B291

### 3.2. Deliverable D 1.2

All experiments referred to in chapter 5 “Upgraded TRL 4 AFP products in the side-stream” were performed at standard conditions; all relevant data are given in the deliverable itself, as are all available results. No sample-remains were re-used, so no sample-numbers were generated.

The samples described in chapter 6 “Upgraded AFP products in the main-stream” are referred to as BM-FH-3400E (straw-based) and BM-FH-5FF37 (Miscanthus-based).

### 3.3. Deliverable D 1.3

The additional 2x10 Litres of Bio-oil to be shipped to CERTH for co-processing tests mentioned in chapter 6 “Deliverable verification” are referred to as BM-FH-9CFC7 (Wheat/barley-straw-based) and BM-FH-9CFC7 (Miscanthus-based).

### 3.4. Deliverable D 1.4

The bio-oils referred to in D1.4 are listed in Table 2.

**Table 2:** Identifiers of bio-oils in D1.4

Table in D1.4	Feedstock	Identifier
Table 3	Wheat / barley straw	BM-FH-00BB9
	Miscanthus	BM-FH-737A9 –see D1.4/Table 6, analytical sample
Table 5	Wheat / barley straw	BM-FH-3400E
	Miscanthus	BM-FH-5FF37
Table 6	Miscanthus	BM-FH-737A9

### 3.5. Deliverable D 1.5

The biochars investigated in Deliverable D 1.5 “Report on evaluation of by-product utilisation pathways” were derived from the AFP-runs with total condensation described in D1.1 while producing the bio-oils referred to as BM-FH-00BB9 (straw-based) and FH-080E9 (Miscanthus-based).

## 4. Funding and disclaimer

The project BioMates has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 727463. For additional information on the project and contact details, please visit [www.biomates.eu](http://www.biomates.eu).



This document reflects only the authors' view; the European Commission and its responsible executive agency CINEA are not responsible for any use that may be made of the information it contains.

## 5. Literature

- [1] Heil, Volker; Schulzke, Tim; *BioMates WP1: Novel pyrolysis oil from non-food/feed biomass Data sheet: Identifiers for samples and blends, Version 01, 25/10/2021*, DOI: 10.24406/fordatis/156
- [2] Heil, Volker; *BioMates Data Management Plan – Level 2: Coding of identifiers for WP1-samples and -blends – Version 02, 08/04/2021*, DOI: 10.24406/fordatis/167