

Annex 2

This appendix includes a link¹ to a virtual document titled ‘Addendum of data related to drying of faecal sludge from on-site sanitation facilities and fresh faeces’. This document was compiled based on a project funded by the Bill & Melinda Gates Foundation (BMGF) - ‘Characterisation of faecal material during drying’ - after faecal sludge drying was recognised as a gap in the implementation of innovative sanitation technologies.

The addendum summarises the results from experiments that are directly or indirectly related to the drying process. The data was obtained from experimental work conducted from 2013 to date, involving several research institutions. As the addendum is an initiative led by the Pollution Research Group at the University of KwaZulu-Natal, most of the data comes from this organisation. Partner institutions joined in this initiative and shared their data, including: (i) Swansea University through the SPECIFIC research group; (ii) Cranfield University through their energy laboratory; (iii) Duke University through their WASH-AID centre; (iv) Laval University through their Department of Civil and Water Engineering; (v) Victoria University through their Public & Environmental Engineering laboratory; and (vi) the Swiss Federal Institute of Aquatic Science and Technology (Eawag) through their Sanitation, Water and Solid Waste for Development (Sandec) department.

The addendum includes a landscape and the fundamentals of faecal sludge drying, and a summary and discussion of the results presented in datasheets. These datasheets are categorised in eight sections according to the different drying processes or faecal sludge properties: thermodynamics, kinetics, physiochemical properties, morphology, mechanical properties, dewaterability, disinfection, and gas emission. Different types of faecal samples were used for the generation of the data: fresh faeces and faecal sludge from ventilated improved pit (VIP) latrines, urine diversion dry toilets (UDDT), and an anaerobic baffled reactor (ABR) from a decentralised wastewater treatment plant (DEWAT).

In each datasheet, the data is displayed as graphs and includes an interpretation. In addition to this, the datasheets contain basic information such as feedstock, laboratory equipment, experimental conditions and performed analysis to explain how the data was obtained. The datasheets also offer bibliographic references to refer the reader to the relevant literature publication, and hyperlinks to the raw data files.

¹ <https://gatesopenresearch.org/documents/4-188>