

1. Record Nr.	UNINA9910263752803321
Autore	Roussel Jimmy
Titolo	Trace Element Supplementation As a Management Tool for Anaerobic Digester Operation : Benefits and Risks
Pubbl/distr/stampa	IWA Publishing, 2018 London : , : IWA Publishing, , 2018 ©2018
ISBN	1-5231-2327-3
Edizione	[1st ed.]
Descrizione fisica	1 online resource
Altri autori (Persone)	FermosoFernando G CollinsGavin
Disciplina	628.354
Soggetti	Water supply & treatment
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Introduction -- How to (choose to read) -- Do I need to add trace elements to my digester? -- What are the benefits of adding trace elements to a digester? -- Which trace elements do I need to add to my digester? -- Strategy for trace elements supplementation -- Risks linked with TE supplementation -- COST action ES 1302 -- References -- Credits.
Sommario/riassunto	" This guide is intended for use by industry stakeholders, decision-makers and digester operators in navigating the topic of trace element (TE) supplementation as a management tool for anaerobic digester operation. The subject is the application of TE, and supplementation regimes in anaerobic waste-conversion biotechnologies, such as biogas digesters. TE is a term used to include a wide range of micronutrients essential for the microbial community underpinning AD. TE mostly includes elements from the metal groups (e.g. cobalt, nickel, zinc and tungsten) but also other elemental groups, such as metalloids (e.g. selenium). TE are dosed to anaerobic digesters to boost biological activity and to increase biogas production rates. Little is understood about the concentrations and dosing strategies best suited to sustained supplementation and stable performance in anaerobic biotechnologies.

A range of companies offer proprietary blends of trace elements for supplementation of anaerobic digesters. Very little joined-up information is available on the concentrations of individual TE best suited to improved digester performance. Moreover, typically no attention whatsoever is paid to the bioavailability of TE dosed to digesters i.e. despite high concentrations, TE may not be available for uptake by the microorganisms underpinning the digestion process. Based on extensive engagement with a range of stakeholders throughout the course of the recent EU COST Action on 'The ecological roles of trace metals in anaerobic biotechnologies', and particularly on feedback from industrial partners, it is clear that such a guide is needed by industry stakeholders, decision-makers and operators of anaerobic digesters."

---