



BSI Standards Publication

Sludge, treated biowaste and soil — Detection and enumeration of *Escherichia coli*

National foreword

This Published Document is the UK implementation of CEN/TR 16193:2013.

This technical report contains details of three methods evaluated for their suitability for 'horizontal' application for sludge, treated biowaste and soil. The UK committee believes that these methods are not fit for their intended purpose and are not appropriate to samples of all such materials, as the sample matrices are not sufficiently similar.

It should be noted that in merging three separate drafts to achieve the final text, incompatibilities and conflicting interpretation have been introduced:

- the document does not adhere to a recognised definition of *E. coli* as target organism (see SCA methods referred to below);
- the inter laboratory validation undertaken (as found in Tables 4, 9 and 14) is considered by UK technical experts as demonstrating poor reproducibility;
- soil matrices were not included in the validation.

The recommended methods for UK laboratories intending to analyze waste-water sludge can be found in 'The Microbiology of Sewage Sludge: Part 3 (2003) — Methods for the isolation and enumeration of *Escherichia coli*, including verocytotoxigenic *Escherichia coli*' published by the Environment Agency Standing Committee of Analysts (SCA) in the series 'Methods for the examination of water and associated materials'.

SCA methods are also considered suitable for determining *E. coli* in some treated biowaste applications such as compost, under PAS 100:2005, and digestates, under PAS 110:2010. BS ISO 16649-2:2001 provides a method suitable for enumeration of *E. coli* in food and animal feeding stuffs. These methods might also be applicable to soil but this would need to be verified using the approach described in DD ENV ISO/TR 13843:2001, *Water Quality — Guidance on Validation of Microbiological Methods*.

The UK participation in its preparation was entrusted to Technical Committee H/-/4, Environmental testing programmes.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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