



DRAFT TANZANIA STANDARD

Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of Salmonella - Part 4: Identification of monophasic Salmonella Typhimurium (1,4,[5],12:i:-) by polymerase chain reaction (PCR)

TANZANIA BUREAU OF STANDARDS

0. National Foreword

The Tanzania Bureau of Standards is the statutory national standards body for Tanzania, formally established by the Act.No.3 of 1975, which was amended and repealed by Act.No.2 of 2009.

The Microbiology Technical Committee, under the supervision of the Agriculture and Food Standards Divisional Committee (AFDC), has prepared this Tanzania Standard.

This Tanzania standard is the identical adoption to ISO 6579-4:2025 - Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* - Part 4: Identification of monophasic *Salmonella* Typhimurium (1,4,[5],12:i:-) by polymerase chain reaction (PCR), published by International Organization for Standardization (ISO).

Terminology and conventions

The text of the International Standard is hereby being recommended for approval without deviation for publication as Tanzania standard.

Some terminologies and certain conventions are not identical with those used in Tanzania standards; attention is drawn to the following: -

- 1) The comma has been used as a decimal marker for metric dimensions. In Tanzania Standards, it is current practice to use “full point” on the baseline as the decimal marker.
- 2) Where the words “International Standard(s)” appear, referring to this standard they should read “Tanzania Standard(s)”.

1. Scope

This document specifies a horizontal in vitro method for the molecular identification and differentiation of the monophasic variant of *Salmonella enterica* subsp. *enterica* serovar Typhimurium (1,4,[5],12:i:-) lacking the second H phase H:1,2, starting from isolates. The method detects specific DNA sequences of an intergenic region of the first H phase flagellin cluster for identification of *Salmonella enterica* subsp. *enterica* serovar Typhimurium (further called *Salmonella* Typhimurium) and specific DNA sequences of genes associated with second H phase flagellar antigen expression. The method is applicable for:

- i. differentiation of the isolate under analysis between monophasic *Salmonella* Typhimurium and the monophasic variant of another *Salmonella* non-Typhimurium serovar that has the same antigenic formula; and
- ii. identification of the isolate under analysis being either monophasic *Salmonella* Typhimurium or (biphasic) *Salmonella* Typhimurium.

This document is applicable for the analysis of a pure culture belonging to the genus *Salmonella*, isolated from:

- i. products intended for human consumption;
- ii. products intended for animal feeding;
- iii. environmental samples in the area of food and feed production and handling; and
- iv. samples from the primary production stage.

This document can also be applied in other domains for identification of monophasic *Salmonella* Typhimurium (e.g. environmental, human health, animal health).

NOTE: This method has been validated in a method evaluation study and in an interlaboratory study with a large set of different strains (target and non-target strains), isolated from different sources (food products, animals, animal feed, primary production samples and humans). For detailed information on the validation, see Annex E.