



DRAFT TANZANIA STANDARD

Water quality-Determination of trace elements using atomic absorption spectrometry with graphite furnace

For stakeholder's comments only

TANZANIA BUREAU OF STANDARDS

0.National foreword

The Tanzania Bureau of Standards is the statutory national standards body for Tanzania, established under the act.No.3 of 1975, amended by act.No.2 of 2009

This draft Tanzania Standard is being prepared by the Water Quality Technical Committee, under the supervision of the Chemicals Divisional Standards Committee (CDC)

This draft Tanzania Standard is an identical adoption of *ISO 15586:2003 Water quality — Determination of trace elements using atomic absorption spectrometry with graphite furnace published by the International Organization for Standardization (ISO)*.

Terminologies and conventions

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

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

The comma has been used as a decimal marker for metric dimensions. In Tanzania, it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words “International Standard” appear, referring to this draft standard, they should read as “Tanzania Standard”.

1. SCOPE

This International Standard includes principles and procedures for the determination of trace levels of: Ag, Al, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, and Zn in surface water, ground water, drinking water, wastewater and sediments, using atomic absorption spectrometry with electrothermal atomization in a graphite furnace. The method is applicable to the determination of low concentrations of elements.

The detection limit of the method for each element depends on the sample matrix as well as of the instrument, the type of atomizer and the use of chemical modifiers. For water samples with a simple matrix (i.e. low concentration of dissolved solids and particles), the method detection limits will be close to instrument detection limits. The minimum acceptable detection limit values for a 20- μ l sample volume are given in Table 1.