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DRAFT TANZANIA STANDARD

Water quality-Determination of ammonium nitrogen in water - small-scale sealed tube method

TANZANIA BUREAU OF STANDARDS

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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 23695:2023 Water quality-Determination of ammonium nitrogen in water - Small-scale sealed tube method 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 document specifies a method for the determination of ammonium nitrogen (NH_4-N) in drinking water, groundwater, surface water, wastewater, bathing water and mineral water using the small-scale sealed tube method. The result can be expressed as NH_4 or NH_4-N or NH_3 or NH_3-N.

NOTE 1 In the habitual language use of sewage treatment and on the displays of automated sealed-tube test photometers or spectrophotometers, NH_4 without indication of the positive charge has become the common notation for the parameter ammonium. This notation is adopted in this document even though not being quite correct chemical nomenclature.

This method is applicable to (NH_4-N) concentration ranges from 0.01 mg/l to 1 800 mg/l of NH_4-N. The measuring ranges of concentration can vary depending on the type of small-scale sealed tube method of different manufacturers. Concentrations even slightly higher than the upper limit indicated in the manufacturers manual relating to the small-scale sealed tube method used, cannot be reported as accurate results. It is up to the user to choose the small-scale sealed tube test with the appropriate application range or to adapt samples with concentrations exceeding the measuring range of a test by preliminary dilution.

NOTE 2: The results of a small-scale sealed tube are most precise in the middle of the application range of the test.

All manufacturers' methods are based on the Berthelot reaction and its modifications to develop indophenol blue colour. Reagents mixtures can differ slightly based on manufacturers small-scale sealed tube method, see Clause 9. This method is applicable to non-preserved samples by using small- scale sealed tubes for the determination of drinking water, groundwater, surface water, wastewater and to preserved samples. The method is applicable to samples with suspended materials if these materials are removable by filtration.