
Draft Tanzania Standard

Fertilizers – Determination of Nitrate Nitrogen

DRAFT FOR STAKEHOLDERS' COMMENTS ONLY

0 FOREWORD

Nitrogen is one among three plant macro elements (NPK). Determination of nitrate nitrogen can be done to all fertilizers containing Nitrogen. It can be determined by different methods such as calculating the total nitrogen then deducting ammoniacal nitrogen and Nitron gravimetric method which consists in precipitating of nitrate ions in acid solution as a complex with nitron reagent, filtrating of the precipitate, drying and weighing.

In reporting the results of a test or analysis made in accordance with this standard, if the final value observed or calculated, is to be rounded off, it shall be done in accordance with TZS 4.

For the purpose of this standard only analytical grade reagents and distilled water shall be used.

1 SCOPE

This Tanzania standard prescribes a method for the determination of nitrate nitrogen in fertilizers.

2 REFERENCE

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

TZS 4 Rounding off numerical values

TBS/AFDC 10 (4589) P₃ Fertilizers and Soil Conditioners – Vocabulary

TZS 159 Fertilizer - Methods of sampling

TBS/AFDC 10 (4583) P₃ - Determination of Total Nitrogen Content - Titrimetric Method after Distillation

TBS/AFDC 10 (4579) P₃ - Solid fertilizers – Preparation of samples for chemical and physical analysis

TBS/AFDC 10 (4584) P₃ Fertilizers – Determination of ammoniacal nitrogen content – Titrimetric method after distillation

3 SAMPLING

The sample shall be drawn in accordance with TZS 159

3.1 Preparation of the sample

Fertilizer sample shall be prepared according to TBS/AFDC 10 (4579) P₃

4 DETERMINATION OF NITRATE NITROGEN

4.1 Determination of total Nitrogen

Total nitrogen shall be determined in accordance with TBS/AFDC 10 (4583) P₃

4.2 Determination of ammoniacal nitrogen

Ammoniacal nitrogen shall be determined in accordance with TBS/AFDC 10 (4584) P₃

4.3 Calculation of Nitrate Nitrogen

Nitrate Nitrogen (%)= Total nitrogen (TN) – Ammoniacal nitrogen (N)

DRAFT FOR STAKEHOLDERS' COMMENTS ONLY