ISO 20130:2018 (E)

Soil quality — Measurement of enzyme activity patterns in soil samples using colorimetric substrates in micro-well plates

Contents

		Foreword		
		Introduction		
1		Scope		
2		Norma	ative references	
3		Terms and definitions, symbols and abbreviated terms		
	3.1 3.2		Terms and definitions Symbols and abbreviated terms	
4		Princi	ple	
5		Reactives		
	5.1 5.2 5.2.1 5.2.2		Buffers and reageants Substrates and standards Preparation of standard solutions Preparation of substrate solutions	
6	Apparatus and materials		atus and materials	
7		Procedure		
	7.1 7.1.1 7.1.2 7.1.3 7.2.1 7.2.1 7.2.1 7.2.2 7.2.3 7.2.3 7.2.3	2 3 4 1.1 1.2 2 3 3.1	Establishment of calibration curves General Solution of PNP Solution of β-naphthylamine Solution of ammonium chloride Sampling Sample preparation Homogenization Preparation of sample plates Addition of substrate Absorbance measurements Measurements of enzyme activities with PNP as reaction product (ARS, β-GAL, α-GLU β-GLU, NAG, PHOS, PAC, PAK) Measurements of arylamidase activities (ARN) Measurements of urease activities	
8		Calcul	lation of results	
9		Expre	ssion of results	
10		Validity criteria		
11		Interlaboratory validation		
12		Test report		
Annex	A (informative) Validation of the method and intralaboratory tests for eva activities with colorimetric method		mative) Validation of the method and intralaboratory tests for evaluating soil enzymatic ies with colorimetric method	
	A.1 A.2		Aim Background	

- A.3 Test materials and methodology
- A.4 Data analysis
- A.5 Validation parameters
- Annex B (informative) International ring test for evaluating soil enzymatic activities with colorimetric method
 - B.1 Aim
 - B.2 Background
 - B.3 Test materials and methodology
 - B.4 Evaluation of the standard curve results
 - B.5 Evaluation of the soils enzymatic activities results

Page count: 29