ISO 21793:2020 (E)

Water quality — Determination of total organic carbon (TOC), dissolved organic carbon (DOC), total bound nitrogen (TNb), dissolved bound nitrogen (DNb), total bound phosphorus (TPb) and dissolved bound phosphorus (DPb) after wet chemical catalysed ozone hydroxyl radical oxidation (COHR)

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Principle

5 Interferences

5.1 General
5.2 TOC
5.3 TN
5.4 TP

6 Reagents

7 Solution preparations

7.1 Blank solution
7.2 Sample oxidation solutions
7.2.1 Sulfuric acid TIC and catalyst solution
7.2.2 Base oxidation solution
7.2.3 TP solution
7.2.4 TP hydrolysis solution
7.3 Calibration stock solutions
7.4 Individual calibration standard solutions
7.4.1 TOC
7.4.2 TN
7.4.3 TP
7.4.4 Combined calibration standard solutions
7.5 System check stock solutions
7.5.1 TOC and TN stock solution
7.5.2 TP stock solution
7.6 Particle processing control solution
7.7 Gases

8 Apparatus

9 Quality requirements for the analytical system

9.1 System check
9.2 Recovery and variation of replicate determinations for particle processing control for TOC, TNb, and TPb

10 Sampling and sample preparation

10.1 Sampling and sample injection

11 Procedure

11.1 General
11.2 Calibration
11.3 Validity check of the calibration function
11.4 Measurement
11.4.1 General
11.4.2 Determination
11.4.2.1 General
11.4.2.2 TOC, TNb, TPb determination (direct method)
11.4.2.3 Test for particle processing control

12 Evaluation

13 Expression of results

14 Test report

Annex A (normative) Determination of total organic carbon that includes purgeable organic carbon by difference

A.1 General
A.2 TC determination (direct method)
A.3 TIC determination (direct method)
A.4 Evaluation

Annex B (informative) Performance data TOC/TN

B.1 General
B.2 Performance data TP

Annex C (informative) Informative validation data, system check recovery and particle check recovery for TOC/TN/TP

Page count: 31