ISO 23920:2020 (E)

Cigarettes — Determination of ammonia in cigarette mainstream smoke with an intense smoking regime using ion chromatography

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Principle

5 Apparatus

6 Reagents

7 Preparation

7.1 General
7.2 Preparation of solutions
7.2.1 Sulphuric acid, 0,01 M — Impinger solution (trapping system 1)
7.2.2 Sulphuric acid, 0,1 M — Solution C (Ion Chromatography Eluent)
7.2.3 MSA 0,003 M — Solution A (Ion chromatography eluent)
7.2.4 Sulphuric acid, 0,01 M — Ammonium standards preparation
7.2.5 Hydrochloric acid, 0,05 M — Solution for GFP impregnation (trapping system 2)
7.2.6 Hydrochloric acid, 0,01 M — Extraction solution (trapping system 2)
7.3 Preparation of standards
7.3.1 Primary ammonium stock solution
7.3.2 Calibration standards

8 Sampling

9 Tobacco product preparation

10 Sample generation — Smoking of cigarettes

10.1 General
10.2 Smoking machine setup
10.2.1 General
10.2.2 Trapping system 1 — GFP and impinger traps
10.2.3 Trapping system 2 — Impregnated GFP
10.2.3.1 Impregnation procedure
10.2.3.2 Assembly of trapping system 2
10.3 Smoking

11 Sample analysis

11.1 Preparation of sample
11.1.1 Extraction of GFP – Trapping system 1
11.1.2 Extraction of GFP – Trapping system 2
11.2 Determination
11.2.1 Ion chromatography operating conditions
11.2.2 Calibration
11.2.3 Calculation

12 Repeatability and reproducibility

12.1 General
12.2 Results of the 2015 collaborative study

13 Report

Annex A (informative) Examples of chromatograms

Page count: 11