

# Analytical Chemistry for Metals, Ores, and Related Materials: E 32 - latest

## Table of Contents

E34-11e1 Standard Test Methods for Chemical Analysis of Aluminum and Aluminum-Base Alloys

E37-05(2011) Standard Test Methods for Chemical Analysis of Pig Lead

E53-07(2013) Standard Test Method for Determination of Copper in Unalloyed Copper by Gravimetry

E55-11 Standard Practice for Sampling Wrought Nonferrous Metals and Alloys for Determination of Chemical Composition

E88-11 Standard Practice for Sampling Nonferrous Metals and Alloys in Cast Form for Determination of Chemical Composition

E247-01(2010) Standard Test Method for Determination of Silica in Manganese Ores, Iron Ores, and Related Materials by Gravimetry

E248-12 Standard Test Method for Determination of Manganese in Manganese Ores by Pyrophosphate Complexed Permanganate Potentiometric Titrimetry

E255-07(2014) Standard Practice for Sampling Copper and Copper Alloys for the Determination of Chemical Composition

E278-01(2010)e1 Standard Test Method for Determination of Phosphorus in Iron Ores by Phosphomolybdate Coprecipitation and Nitric Acid Titrimetry

E279-97(2010) Standard Test Method for Determination of Abrasion Resistance of Iron Ore Pellets and Sinter by the Tumbler Test

E305-13 Standard Practice for Establishing and Controlling Atomic Emission Spectrochemical Analytical Curves

E314-10 Standard Test Methods for Determination of Manganese in Iron Ores by Pyrophosphate (Potentiometric) and Periodate (Photometric) Techniques

E316-11 Standard Test Method for Determination of Iron in Manganese Ores by Hydrogen Sulfide Reduction-Dichromate Titrimetry

E322-12 Standard Test Method for Analysis of Low-Alloy Steels and Cast Irons by Wavelength Dispersive X-Ray Fluorescence Spectrometry

E342-11 Standard Test Method for Determination of Chromium Oxide in Chrome Ores by Permanganate Titrimetry

E350-12 Standard Test Methods for Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron

E351-13 Standard Test Methods for Chemical Analysis of Cast Iron—All Types

E352-13 Standard Test Methods for Chemical Analysis of Tool Steels and Other Similar Medium- and High-Alloy Steels

E353-14 Standard Test Methods for Chemical Analysis of Stainless, Heat-Resisting, Maraging, and Other Similar Chromium-Nickel-Iron Alloys

E354-14 Standard Test Methods for Chemical Analysis of High-Temperature, Electrical, Magnetic, and Other Similar Iron, Nickel, and Cobalt Alloys

E363-09 Standard Test Methods for Chemical Analysis of Chromium and Ferrochromium

E367-09 Standard Test Methods for Chemical Analysis of Ferroniobium

E372-13 Standard Test Method for Determination of Calcium and Magnesium in Magnesium Ferrosilicon by EDTA Titration

E382-12 Standard Test Method for Determination of Crushing Strength of Iron Ore Pellets

E396-12e1 Standard Test Methods for Chemical Analysis of Cadmium

E406-81(2012) Standard Practice for Using Controlled Atmospheres in Spectrochemical Analysis

E415-14 Standard Test Method for Analysis of Carbon and Low-Alloy Steel by Spark Atomic Emission Spectrometry

E439-10 Standard Test Methods for Chemical Analysis of Beryllium

E463-14a Standard Test Method for Determination of Silica in Fluorspar by Silico-Molybdate Visible Spectrophotometry

E465-11 Standard Test Methods for Determination of Manganese (IV) in Manganese Ores by Redox Titrimetry

E478-08 Standard Test Methods for Chemical Analysis of Copper Alloys

E507-13 Standard Test Method for Determination of Aluminum in Iron Ores by Flame Atomic Absorption Spectrometry

E508-13 Standard Test Method for Determination of Calcium and Magnesium in Iron Ores by Flame Atomic Absorption Spectrometry

E520-08 Standard Practice for Describing Photomultiplier Detectors in Emission and Absorption Spectrometry

E536-15 Standard Test Methods for Chemical Analysis of Zinc and Zinc Alloys

E539-11 Standard Test Method for Analysis of Titanium Alloys by X-Ray Fluorescence Spectrometry

E572-13 Standard Test Method for Analysis of Stainless and Alloy Steels by Wavelength Dispersive X-Ray Fluorescence Spectrometry

E581-10 Standard Test Methods for Chemical Analysis of Manganese-Copper Alloys

E634-12 Standard Practice for Sampling of Zinc and Zinc Alloys by Spark Atomic Emission Spectrometry

E716-10 Standard Practices for Sampling and Sample Preparation of Aluminum and Aluminum Alloys for Determination of Chemical Composition by Spectrochemical Analysis

E815-11 Standard Test Method for Determination of Calcium Fluoride in Fluorspar by Complexometric Titrimetry

E826-14 Standard Practice for Testing Homogeneity of a Metal Lot or Batch in Solid Form by Spark Atomic Emission Spectrometry

E882-10 Standard Guide for Accountability and Quality Control in the Chemical Analysis Laboratory

E945-12 Standard Test Method for Determination of Zinc in Zinc Ores and Concentrates by EDTA Complexometric Titrimetry

E1010-09 Standard Practice for Preparation of Disk Specimens of Steel and Iron for Spectrochemical Analysis by Remelting

E1019-11 Standard Test Methods for Determination of Carbon, Sulfur, Nitrogen, and Oxygen in Steel, Iron, Nickel, and Cobalt Alloys by Various Combustion and Fusion Techniques

E1070-11 Standard Test Method for Determination of Phosphorus in Iron Ores by Phospho-Molybdenum-Blue Spectrophotometry

E1085-09 Standard Test Method for Analysis of Low-Alloy Steels by X-Ray Fluorescence Spectrometry

E1086-14 Standard Test Method for Analysis of Austenitic Stainless Steel by Spark Atomic Emission Spectrometry

E1097-12 Standard Guide for Determination of Various Elements by Direct Current Plasma Atomic Emission Spectrometry

E1172-87(2011) Standard Practice for Describing and Specifying a Wavelength-Dispersive X-Ray Spectrometer

E1184-10 Standard Practice for Determination of Elements by Graphite Furnace Atomic Absorption Spectrometry

E1251-11 Standard Test Method for Analysis of Aluminum and Aluminum Alloys by Spark Atomic Emission Spectrometry

E1257-93(2008) Standard Guide for Evaluating Grinding Materials Used for Surface Preparation in Spectrochemical Analysis

E1277-14 Standard Test Method for Analysis of Zinc-5% Aluminum-Mischmetal Alloys by ICP Emission Spectrometry

E1306-11 Standard Practice for Preparation of Metal and Alloy Samples by Electric Arc Remelting for the Determination of Chemical Composition

E1329-10 Standard Practice for Verification and Use of Control Charts in Spectrochemical Analysis

E1335-08 Standard Test Methods for Determination of Gold in Bullion by Fire Assay Cupellation Analysis

E1361-02(2014)e1 Standard Guide for Correction of Interelement Effects in X-Ray Spectrometric Analysis

E1409-13 Standard Test Method for Determination of Oxygen and Nitrogen in Titanium and Titanium Alloys by Inert Gas Fusion

E1446-13 Standard Test Method for Chemical Analysis of Refined Gold by Direct Current Plasma Atomic Emission Spectrometry

E1447-09 Standard Test Method for Determination of Hydrogen in Titanium and Titanium Alloys by the Inert Gas Fusion Thermal Conductivity/Infrared Detection Method

E1473-09 Standard Test Methods for Chemical Analysis of Nickel, Cobalt, and High-Temperature Alloys

E1479-99(2011) Standard Practice for Describing and Specifying Inductively-Coupled Plasma Atomic Emission Spectrometers

E1552-15 Standard Test Method for Determining Hafnium in Zirconium and Zirconium Alloys By Direct Current Plasma—Atomic Emission Spectrometry

E1568-13 Standard Test Method for Determination of Gold in Activated Carbon by Fire Assay Gravimetry

E1569-09 Standard Test Method for Determination of Oxygen in Tantalum Powder by Inert Gas Fusion Technique

E1587-10 Standard Test Methods for Chemical Analysis of Refined Nickel

E1600-15 Standard Test Methods for Determination of Gold in Cyanide Solutions

E1601-12 Standard Practice for Conducting an Interlaboratory Study to Evaluate the Performance of an Analytical Method

E1621-13 Standard Guide for Elemental Analysis by Wavelength Dispersive X-Ray Fluorescence Spectrometry

E1659-12 Standard Test Methods for Coating Mass and Chemical Analysis of Zinc-Nickel Alloy Electrolytically Coated on Steel Sheet

E1770-14 Standard Practice for Optimization of Electrothermal Atomic Absorption Spectrometric Equipment

E1771-07 Standard Test Method for Determination of Copper in Anode and Blister Copper

E1805-13 Standard Test Method for Determination of Gold in Copper Concentrates by Fire Assay Gravimetry

E1806-09 Standard Practice for Sampling Steel and Iron for Determination of Chemical Composition

E1832-08(2012) Standard Practice for Describing and Specifying a Direct Current Plasma Atomic Emission Spectrometer

E1833-07a(2013)e1 Standard Practice for Sampling of Blister Copper in Cast Form for Determination of Chemical Composition

E1834-11 Standard Test Method for Analysis of Nickel Alloys by Graphite Furnace Atomic Absorption Spectrometry

E1835-14 Standard Test Method for Analysis of Nickel Alloys by Flame Atomic Absorption Spectrometry

E1852-13 Standard Test Method for Determination of Low Levels of Antimony in Carbon and Low-Alloy Steel by Graphite Furnace Atomic Absorption Spectrometry

E1898-13 Standard Test Method for Determination of Silver in Copper Concentrates by Flame Atomic Absorption Spectrometry

E1914-07 Standard Practice for Use of Terms Relating to the Development and Evaluation of Methods for Chemical Analysis

E1916-11 Standard Guide for Identification of Mixed Lots of Metals

E1917-13 Standard Test Method for Determination of Phosphorus in Nickel, Ferronickel, and Nickel Alloys by Phosphovanadomolybdate Spectrophotometry

E1938-13 Standard Test Method for Determination of Titanium in Nickel Alloys by Diantipyrylmethane Spectrophotometry

E1941-10 Standard Test Method for Determination of Carbon in Refractory and Reactive Metals and Their Alloys by Combustion Analysis

E1950-10 Standard Practice for Reporting Results from Methods of Chemical Analysis

E1999-11 Standard Test Method for Analysis of Cast Iron by Spark Atomic Emission Spectrometry

E2050-12a Standard Test Method for Determination of Total Carbon in Mold Powders by Combustion

E2093-12 Standard Guide for Optimizing, Controlling and Assessing Test Method Uncertainties from Multiple Workstations in the Same Laboratory Organization

E2209-13 Standard Test Method for Analysis of High Manganese Steel by Spark Atomic Emission Spectrometry

E2242-13 Standard Test Method for Column Percolation Extraction of Mine Rock by the Meteoric Water Mobility Procedure

E2293-03(2013) Standard Practice for Drying of Metal Bearing Ores, Concentrates, and Related Metallurgical Materials for the Determination of Mercury

E2295-13 Standard Practice for Fire Assay Silver Corrections in Analysis of Metal Bearing Ores, Concentrates, and Related Metallurgical Materials by Silver Determination in Slags and Cupels

E2296-03(2013) Standard Practice for Silver Corrections in Metal Bearing Ores, Concentrates, and Related Metallurgical Materials by Fire Assay Slag Recycling and Cupel

## Proof Gravimetry

E2371-13 Standard Test Method for Analysis of Titanium and Titanium Alloys by Direct Current Plasma and Inductively Coupled Plasma Atomic Emission Spectrometry (Performance-Based Test Methodology)

E2465-13 Standard Test Method for Analysis of Ni-Base Alloys by Wavelength Dispersive X-Ray Fluorescence Spectrometry

E2575-08 Standard Test Method for Determination of Oxygen in Copper and Copper Alloys

E2594-09(2014) Standard Test Method for Analysis of Nickel Alloys by Inductively Coupled Plasma Atomic Emission Spectrometry (Performance-Based Method)

E2626-08e1 Standard Guide for Spectrometric Analysis of Reactive and Refractory Metals

E2792-13 Standard Test Method for Determination of Hydrogen in Aluminum and Aluminum Alloys by Inert Gas Fusion

E2823-11 Standard Test Method for Analysis of Nickel Alloys by Inductively Coupled Plasma Mass Spectrometry (Performance-Based Method)

E2824-11 Standard Test Method for Determination of Beryllium in Copper-Beryllium Alloys by Phosphate Gravimetric Method

E2857-11 Standard Guide for Validating Analytical Methods

E2941-14 Standard Practices for Extraction of Elements from Ores and Related Metallurgical Materials by Acid Digestion