

## CORESTA Recommended Methods with history and correspondence with ISO Standards

**DISCLAIMER:** This table is made available for the convenience of tobacco researchers and is for information purposes only. The precise correlation or equivalence between CORESTA Recommended Methods (CRM) and ISO Standards has the potential to vary greatly at any point in time because the CRMs and ISO Standards are revised and updated independently.

REF	TITLE	Version	DATE	Bulletin or CD/Web	Observations	ISO equivalent	By Sub-Group (SG) / Task Force (TF)
N° 1	Determination of Dithiocarbamates in Tobacco	3	Nov 1978	1978-2	v1: 1973-1 v2: 1974-2	6466:1983	-
N° 2	<i>Determination of Organochlorine Pesticide Residues on Tobacco</i>	3	May 1997	1997-1	v1: 1974-2 v2: 1994-3/4 Withdrawn May 2014 (obsolete)	4389:2000 v1-1981 ; v2-1997	SG Pesticides
N° 3	<i>Determination of the air permeability of cigarette paper</i>	1	1976	1975-3/4	Replaced by CRM40		-
N° 4	<i>Determination of Maleic Hydrazide Residues in Tobacco</i>	1	Sept 1976	1976-2	Withdrawn June 2013 (obsolete)	4876:1980	
N° 5	Determination of Carbon Monoxide in the Mainstream Smoke of Cigarettes by Non-Dispersive Infrared Analysis	2	Sept 1993	1993-4	v1: 1982-2	8454:2007 v1-1987 ; v2-1995	TF Gas Phase*
N° 6	Measurement of Ventilation : Definitions and Measurement Principles	3	Sept 2016	Web	v1: 1983-2/3 v2: 2000-1	9512:2002 v1-1993	TF Filter Ventilation* SG Physical Test Methods
N° 7	Determination of Nicotine in the Mainstream Smoke of Cigarettes by Gas Chromatographic Analysis	2	Aug 1991	1991-3	v1: 1986-3/4	10315:2000 v1-1991	TF Review of Smoking Methods*
N° 8	Determination of Water in the Mainstream Smoke of Cigarettes by Gas Chromatographic Analysis	2	Aug 1991	1991-3	v1: 1987-2	10362-1:1999 v1-1991	TF Review of Smoking Methods*
N° 9	Determination of Nicotine in Cigarette Filters by Gas Chromatographic Analysis	2	Apr 2009	CD 28	v1: 1989-2		SG Routine Analytical Chemistry
N° 10	<i>Machine smoking of cigarettes - Determination of crude and dry smoke condensate</i>	1	Sept 1968	1969-1	Replaced by CRM23		-
N° 12	Determination of Alkaloids in Cigarette Smoke Condensate	1	Sept 1968	1969-2		3400:1997 v1-1976 ; v2-1989	

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N° 13	Determination of Alkaloid Retention by Cigarette Filters	1	Sept 1968	1969-2	By spectrophotometry	3401:1991 v1-1977 by GC: 3401-2	
N° 14	<i>Determination of nicotine in ambient air by gas chromatographic analysis</i>	2	Sept 1993	1993-4	v1: 1990-1 Replaced by CRM50		-
N° 15	Cigarettes - Determination of Water in Smoke Condensates - Karl Fischer Method	1	Mar 1990	1990-2		10362-2:1994	
N° 16	Lamina Strip Particle Size Determination	1	Jan 1991	1991-1		12194:1995	TF Tobacco Size*
N° 17	Stem Content of Lamina Strips	1	Jan 1991	1991-1		12195:1995	TF Tobacco Size*
N° 18	<i>Materials used as cigarette tipping papers having a perforated zone - Determination of unit air-flow and permeability</i>	1	Jan 1991	1991-1	Replaced by CRM40		-
N° 20	Determination of Alkaloids in Manufactured Tobacco	1	Sept 1968	1969-2		2881:1992 v1-1974 ; v2-1977	
N° 21	Atmosphere for Conditioning and Testing Tobacco and Tobacco Products	2	Aug 1991	1991-3	v1: 1989-4	3402:1999 v1-1975 ; v2-1978 ; v3 1991	TF Review of Smoking Methods*
N° 22	Routine Analytical Cigarette-Smoking Machine: Specifications, Definitions and Standard Conditions	2	Aug 1991	1991-3	v1: 1989-4	3308:2000 v1-1977 ; v2-1986 ; v3 1991	TF Review of Smoking Methods*
N° 23	Determination of Total and Nicotine-Free Dry Particulate Matter using a Routine Analytical Cigarette-Smoking Machine Determination of Total Particulate Matter and Preparation for Water and Nicotine Measurements	2	Aug 1991	1991-3	v1: 1989-4	4387:2000 v1-1987 ; v2-1991	TF Review of Smoking Methods*
N° 24	Cigarettes - Sampling	2	Aug 1991	1991-3	v1: 1989-4	8243:2006 v1-1988 ; v2-1991 ; v3 2003	
N° 25	Ambiant Air-Flow around Cigarettes in Routine Analytical Smoking Machines: Control and Monitoring	1	Aug 1991	1991-3			TF Review of Smoking Methods* SG Routine Analytical Chemistry

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N° 30	<i>Determination of Residues of the Suckercide Flumetralin (Prime Plus, CGA-41065) on Tobacco</i>	1	Jun 1991	1991-2	Withdrawn May 2014 (obsolete)		SG Pesticides
N° 31	<i>Determination of Residues of the Suckercide Pendimethalin (Accotab, Stomp) on Tobacco</i>	1	Jun 1991	1991-2	Withdrawn May 2014 (obsolete)		SG Pesticides
N° 32	<i>Determination of Residues of the Suckercide Off-Shoot-T (N-Alkanol Mixture) on Tobacco</i>	1	Jun 1991	1991-2	Withdrawn May 2014 (obsolete)		SG Pesticides
N° 33	Determination of Acetate in Cigarette Paper	1	Jan 1993	1992-3/4		20370:2009	TF Burning Additives in Cigarette Paper*
N° 34	Determination of Citrate in Cigarette Paper	1	Jan 1993	1992-3/4		20369:2009	TF Burning Additives in Cigarette Paper*
N° 35	<i>Determination of Total Alkaloids (as Nicotine) in Tobacco by Continuous Flow Analysis</i>	2	Aug 2010	CD 31	v1: Nov 1994 (1994-3/4) Replaced by CRM85	15152:2003	SG Routine Analytical Chemistry
N° 36	Determination of Nitrate in Tobacco and Smokeless Tobacco Products by Reduction to Nitrite and Continuous Flow Analysis	4	Jan 2015	Web	v1: Nov 1994 (1994-3/4) v2: Aug 2010 (CD31) v3: Aug 2011 (Web)	15517:2003	SG Routine Analytical Chemistry SG Smokeless Tobacco‡
N° 37	Determination of Reducing Substances in Tobacco by Continuous Flow Analysis	2	Aug 2010	CD 31	v1: Nov 1994 (1994-3/4)	15153:2003	SG Routine Analytical Chemistry
N° 38	Determination of Reducing Carbohydrates in Tobacco by Continuous Flow Analysis	2	Aug 2010	CD 31	v1: Nov 1994 (1994-3/4)	15154:2003	SG Routine Analytical Chemistry
N° 39	Determination of the Purity of Nicotine and Nicotine Salts by Gravimetric Analysis - Tungstosilicic Acid Method	1	Nov 1994	1994-3/4		13276:1997	SG Routine Analytical Chemistry
N° 40	<i>Determination of Air Permeability of Materials used as Cigarette Papers, Filter Plug Wrap and Filter Joining Paper including Materials having an Oriented Permeable Zone</i>	1	Oct 1994	1994-3/4	Withdrawn Jan 2017 (obsolete)	2965:2009 v1-1979 ; v2-1997	TF Air Permeability Through Paper*
N° 41	Determination of the Draw Resistance of Cigarettes and Filter Rods	2	Jun 2007	CD 24	v1: 1995-1	6565:2002 v1-1983 ; v2-1999	TF Pressure Drop*
N° 42	Atmosphere for Conditioning and Testing Fine-Cut Tobacco and Fine-Cut Smoking Articles	1	Jun 1997	1997-1		15592-2:2001	TF Roll-Your-Own*
N° 43	Fine-Cut Tobacco - Sampling	1	Jun 1997	1997-1		15592-1:2001	TF Roll-Your-Own*

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N° 45	Determination of Phosphate in Cigarette Paper	1	Jan 1998	1997-4			TF Burning Additives in Cigarette Paper*
N° 46	Atmosphere for Conditioning and Testing Cigars of all Sizes and Shapes	2	June 2018	Web	v1: 1998-1		SG Cigars* SG Cigar Smoking Methods
N° 47	Cigars – Sampling	1	Jan 2000	2000-1			SG Cigars*
N° 50	Environmental Tobacco Smoke - Determination of Nicotine and 3-Ethenylpyridine in the Vapour Phase	1	Jan 2002	CD 13		18145:2003	SG Environmental Tobacco Smoke*
N° 51	Environmental Tobacco Smoke - Estimation of its Contribution to Respirable Suspended Particles - Determination of Particulate Matter by Ultraviolet Absorbance and by Fluorescence	1	Jan 2002	CD 13		15593:2001	SG Environmental Tobacco Smoke*
N° 52	Environmental Tobacco Smoke - Estimation of its Contribution to Respirable Suspended Particles - Method based on Solanesol Determination	1	Jan 2002	CD 13		18144:2003	SG Environmental Tobacco Smoke*
N° 53	Determination of Paper Wrapper Burn Speed	2	Jan 2019	Web	v1: May 2002 (CD14)		TF Cigarette Paper Combustibility* SG Physical Test Methods
N° 54	Determination of Nicotine and Nicotine-Free Dry Particulate Matter in Sidestream Smoke using a Fishtail Chimney and a Routine Analytical/Linear Smoking Machine	2	May 2011	CD 32	v1: Jun 2002 (CD15)	20773:2013	SG Routine Analytical Chemistry
N° 55	Determination of Carbon Monoxide in the Vapour Phase of Cigarette Sidestream Smoke using a Fishtail Chimney and a Routine Analytical/Linear Smoking Machine	2	May 2011	CD 32	v1: Jun 2002 (CD15)	20774:2013	SG Routine Analytical Chemistry
N° 56	Determination of Water in Tobacco and Tobacco Products by Karl Fischer Method	2	Aug 2018	Web	v1: Dec 2002 (CD16) v2: May 2011 (CD32)	6488:2004 v1-1981	SG Routine Analytical Chemistry SG Tobacco and Tobacco Products Analytes

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N° 57	Determination of Water in Tobacco and Tobacco Products by Gas Chromatographic Analysis	1	Aug 2018	Web	v1: Dec 2002 (CD16)	16632:2003	SG Routine Analytical Chemistry SG Tobacco and Tobacco Products Analytes
N° 58	Determination of Benzo[a]Pyrene in Mainstream Cigarette Smoke by Gas Chromatography-Mass Spectrometry Method	5	Nov 2019	Web	v1: Feb 2004 (CD18) v2: Mar 2013 (Web) v3: July 2014 (Web) v4: Jan 2018 (Web)	22634/1:2008	SG Smoke Analytes
N° 59	Determination of Triacetin in Filter Rods by Gas Chromatographic Analysis	1	June 2004	CD 20			TF Plasticisers in Filter Production*
N° 60	Determination of 1,2-Propylene Glycol and Glycerol in Tobacco and Tobacco Products by Gas Chromatography	4	June 2019	Web	v1: Feb 2005 (CD20) v2: May 2011 (CD32) v3: July 2015 (Web)		SG Routine Analytical Chemistry SG Tobacco and Tobacco Products Analytes
N° 61	Determination of 1,2-Propylene Glycol, Glycerol and Sorbitol in Tobacco and Tobacco Products by High Performance Liquid Chromatography (HPLC)	3	July 2015	Web	v1: Feb 2005 (CD20) v2: May 2011 (CD32)		SG Routine Analytical Chemistry SG Smokeless Tobacco‡
N° 62	Determination of Nicotine in Tobacco and Tobacco Products by Gas Chromatographic Analysis	1	Feb 2005	CD 20			SG Routine Analytical Chemistry
N° 63	Determination of Tobacco Specific Nitrosamines in Cigarette Mainstream Smoke - GC-TEA Method	2	Jan 2019	Web	v1: June 2005 (CD20)		SG Special Analytes‡
N° 64	Routine Analytical Cigar-Smoking Machine - Specifications, Definitions and Standard Conditions	2	May 2018	Web	v1: Nov 2005 (CD21)		SG Cigars* SG Cigar Smoking Methods
N° 65	Determination of Total and Nicotine-Free Dry Particulate Matter using a Routine Analytical Cigar-Smoking Machine – Determination of Total Particulate Matter and Preparation for Water and Nicotine Measurements	5	Aug 2019	Web	v1: Nov 2005 (CD21) v2: Jun 2007 (CD24) v3: Jan 2010 (CD30) v4: June 2010 (CD31)		SG Cigars* SG Cigar Smoking Methods

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N° 66	Determination of Nicotine in the Mainstream Smoke of Cigars by Gas Chromatographic Analysis	2	Mar 2020	Web	v1: Nov 2005 (CD21)		SG Cigars* SG Cigar Smoking Methods
N° 67	Determination of Water in the Mainstream Smoke of Cigars by Gas Chromatographic Analysis	2	Mar 2020	Web	v1: Nov 2005 (CD21)		SG Cigars* SG Cigar Smoking Methods
N° 68	Determination of Carbon Monoxide in the Mainstream Smoke of Cigars by Non-Dispersive Infrared Analysis	2	Mar 2020	Web	v1: Jan 2010 (CD30)		SG Cigars* SG Cigar Smoking Methods
N° 69	Determination of pH in Tobacco and Tobacco Products	2	July 2017	CD 31	v1: Jun 2010 (CD31)		SG Smokeless Tobacco‡ SG Tobacco and Tobacco Products Analytes
N° 70	Determination of Selected Volatile Organic Compounds in the Mainstream Smoke of Cigarettes - Gas Chromatography-Mass Spectrometry Method	5	Sept 2019	Web	v1: Jun 2010 (CD30) v2: Mar 2013 (Web) v3: July 2014 (Web) v4: Feb 2018 (Web)	21330:2018 New project ISO 23923	SG Special Analytes‡
N° 71	Smokeless Tobacco Products - Sampling	1	Nov 2011	Web			SG Smokeless Tobacco‡
N° 72	Determination of Tobacco Specific Nitrosamines in Tobacco and Tobacco Products by Liquid Chromatography - Tandem Mass Spectrometry	4	July 2017	Web	v1: June 2011 (CD32) v2: July 2013 (Web) v3: Feb 2016 (Web)	21766:2018	SG Smokeless Tobacco‡ SG Tobacco and Tobacco Products Analytes
N° 73	<i>Determination of Ammonia in Tobacco by Ion Chromatographic Analysis</i>	1	May 2011	CD 32	<i>Superseded by CRM79 - Sept 2015</i>		<i>SG Routine Analytical Chemistry</i>
N° 74	Determination of Selected Carbonyls in Mainstream Cigarette Smoke by High Performance Liquid Chromatography (HPLC)	5	Aug 2019	Web	v1: Aug 2011 (Web) v2: Mar 2013 (Web) v3: July 2014 (Web) v4: Feb 2018 (Web)	21160:2018 New project ISO 23922	SG Special Analytes‡

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N° 75	Determination of Tobacco Specific Nitrosamines in Mainstream Cigarette Smoke by LC-MS/MS	3	Aug 2019	Web	v1: Jun 2012 (Web) v2: July 2014 (Web)	19290:2016	SG Special Analytes <sup>‡</sup>
N° 76	Determination of Moisture Content (Oven Volatiles) of Tobacco and Tobacco Products	2	July 2017	Web	v1: April 2014 (Web)		SG Smokeless Tobacco <sup>‡</sup> SG Tobacco and Tobacco Products Analytes
N° 77	Determination of Diffusion Capacity by Measurement of CO <sub>2</sub> Transfer Rate Through Materials Used as Cigarette Papers and Cigarette Papers having an Oriented Zone of Reduced Diffusion Capacity	2	June 2019	Web	v1: April 2014 (Web)		SG Physical Test Methods
N° 78	Determination of Selected Phenolic Compounds in Mainstream Cigarette Smoke by HPLC-FLD	2	December 2018	Web	v1: July 2014 (Web)	New Projects ISO 23904 / 23905	SG Special Analytes <sup>‡</sup>
N° 79	Determination of Ammonia in Tobacco and Tobacco Products by Ion Chromatographic Analysis	2	March 2018	Web	v1: April 2015 (Web)	21045:2018	SG Smokeless Tobacco <sup>‡</sup> SG Tobacco and Tobacco Products Analytes
N° 80	Use of the Part-Filter Method for the Estimation of Smokers' Exposure to Nicotine and Nicotine-Free Dry Particulate Matter	1	Jan 2016	Web			SG Smoking Behaviour <sup>‡</sup>
N° 81	Routine Analytical Machine for E-Cigarette Aerosol Generation and Collection - Definitions and Standard Conditions	1	June 2015	Web		20768:2018	TF E-Cigarettes <sup>‡</sup>
N° 82	Determination of Benzo[a]pyrene in Tobacco Products by GC-MS	4	March 2018	Web	v1: March 2016 (Web) v2: June 2016 (Web) v3: July 2017 (Web)		SG Smokeless Tobacco <sup>‡</sup> SG Tobacco and Tobacco Products Analytes
N° 83	Determination of Ammonia in Mainstream Cigarette Smoke by Ion Chromatography	2	May 2017	Web	v1: July 2016 (Web)	New Projects ISO 23919 / 23920	SG Special Analytes <sup>‡</sup>

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N° 84	Determination of Glycerin, Propylene Glycol, Water, and Nicotine in the Aerosol of E-Cigarettes by Gas Chromatographic Analysis	2	June 2017	Web	v1: Mar 2017 (Web)		SG E-Vapour
N° 85	Tobacco - Determination of the Content of Total alkaloids as Nicotine - Continuous-Flow Analysis Method using KSCN/DCIC	1	April 2017	Web		Proposed April 2017 Accepted Dec 2017 New Project ISO 22980	SG Routine Analytical Chemistry
N° 86	Determination of Select Carbonyls in Tobacco and Tobacco Products by UHPLC-MS/MS	1	Jan 2018	Web			SG Tobacco and Tobacco Products Analytes
N° 87	Determination of Nicotine in Tobacco Products by GC/MS	1	April 2018	Web			SG Routine Analytical Chemistry SG Tobacco and Tobacco Products Analytes
N° 88	Determination of Water Activity of Tobacco and Tobacco Products	1	Jan 2019	Web			SG Tobacco and Tobacco Products Analytes
N° 89	Tobacco – Determination of the Content of Total Sugars – Continuous-Flow Analysis Method using Hydrochloric Acid / P-Hydroxy Benzoic Acid Hydrazide (PAHBAH)	1	April 2019	Web			SG Routine Analytical Chemistry
N° 90	Determination of Dry and Wet Sealing Strength of Pouches for Smokeless Tobacco and Derivative Products - Definitions and Measurement Principles	2	June 2019	Web	v1: Mar 2019 (Web)		SG Physical Test Methods
N° 91	Determination of 15 PAHs in Tobacco and Tobacco Products by GC-MS/MS or GC-MS	1	April 2019	Web			SG Tobacco and Tobacco Products Analytes
N° 92	Determination of Menthol in Cigarettes and Cut Filler by Gas Chromatography	1	April 2019	Web			SG Routine Analytical Chemistry

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