

Reference Material Data Sheet

1C1 Large Machine Made Cigar

Data Sheet Number: 2022-1C1CTRP

Reference values generated on: 08/01/2022

Reference values are valid until: 08/01/2027

Superseded data sheet code: NA

Description of Material	Large machine made cigar with homogenized tobacco leaf wrapper
Lot/Batch Number	<i>1C1 Large Machine Made Cigar</i>
Matrix	Tobacco blend

Notes

- Reference values listed below reflect analysis results submitted during CORESTA studies (References below) satisfying Clause 5.15 of ISO Guide 34:2009 and statistically evaluated using Approach A in Clause 10.5 of ISO Guide 35:2017.
- The "Reference Uncertainty" listed herein are expanded uncertainties obtained by multiplying the combined standard uncertainty by a constant coverage factor of 3, i.e. $k = 3$.
- The reference values listed herein are reflective of chemical analysis done on a "as is" basis, i.e. the samples were not dried prior to analysis.
- Cigars were smoked using the CORESTA Recommended Method No. 64.
- The values will be updated by the valid until date or as needed.
- Due to the possibility of self-extinguishing, relighting the cigar may be necessary.

1C1 Reference Large Machine Made Cigar Values and Uncertainties

Mainstream Smoke					
Parameter	Reference Value	Certified Uncertainty	Unit	Number of Accepted Data Points	Constant Coverage Factor
Total Particulate Matter (TPM)	78.14	38.64	mg/cigar	45	3
Tar (Nicotine-free dry particulate Matter (NFDPM))	65.81	39.09	mg/cigar	45	3
Carbon Monoxide (CO)	172.14	140.50	mg/cigar	45	3
Nicotine	2.15	2.23	mg/cigar	45	3
Puff Count	94.82	78.73	puffs/cigar	45	3
Water	10.19	9.57	mg/cigar	45	3
Weight	6520.8	1077.8	mg/cigar	45	3

Homogenized Cigar					
Parameter	Reference Value	Certified Uncertainty	Unit	Number of Accepted Data Points	Constant Coverage Factor
Ammonia	2248	1948	µg/g	36	3
Arsenic	461	403	ng/g	24	3
Cadmium	1140	649	ng/g	24	3
Nicotine	10.06	2.97	mg/g	33	3
NNK	884	1401	ng/g	36	3
NNN	3026	5913	ng/g	36	3
NAT	1579	2860	ng/g	36	3
NAB	139	197	ng/g	36	3
Moisture Content	14.56	3.36	%	33	3
pH	6.3	1.01	pH unit	39	3
Water Activity	0.60	0.20	a_w	30	3

CERTIFIED VALUES AND UNCERTAINTIES:

The Certified Values and Uncertainties for the mainstream smoke parameters contained herein are reflective only of data obtained from a Linear Smoking machine.

DATA AQUISITION:

Data used in calculations for constituents were reported in multiple studies listed below.

Mainstream smoke – CORESTA Technical Report Cigar Smoke Analysis 14th Collaborative Study 2019-2020 (April 2021)

Homogenized cigar – CORESTA Technical Report University of Kentucky Cigar Reference Products 2021 Analysis (September 2021)

INTENDED USE: This product may be used for analytical method development, assigning values to materials (when applicable), and, equipment calibration to any applicable extent.

INSTRUCTIONS FOR CORRECT USE: This reference material may be stored in sealed containers or bags at -20°C until testing. Prior to analysis, the reference material should be unopened and transferred to a refrigerator for a minimum of 24 hours or until they are completely thawed, and then moved to room temperature for at least 2 hours until it reached temperature equilibrium. Once the reference materials are equilibrated to room temperature, the reference materials may be stored at 4°C for up to one week, if they will not be analyzed immediately. Any reference materials found to have damaged package should be discarded.

HAZARD INFORMATION: N/A

HOMOGENEITY: Homogeneity of this material is reflected in the “Certified Uncertainties” disclosed herein.

APPROVING PERSONNEL: This material is approved by **Huihua Ji, C. Ruth McNees** and **Ling Yuan** on behalf of CTRP