Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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1004

Accredited to ISO/IEC 17025:2017

Essentra Filter Products Limited

Issue No: 033 **Issue date:** 02 June 2020

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Testing performed at the above address only

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CIGARETTES	Chemical Tests	Documented In-House Methods based on National or International Standards, industry standards or in-house developed
Mainstream Cigarette Smoke	Intense smoking regime (Canadian) for collection of smoke for further testing	SM/032 using Linear Smoking Machine
	ISO smoking regime for collection of smoke for further testing	SM/030 using Linear Smoking Machine
	ISO smoking regime for collection of smoke for further testing	SM/034 using Rotary Smoking Machine
Mainstream Cigarette Smoke, (collected by either ISO or Health Canada Intense smoking regimes)	Total Particulate Matter and puff number	SM/010, SM/020, and SM/060 based on ISO 4387:2000
	Carbon Monoxide Nicotine Water	SM/050 based on ISO 8454:2007 SM/085 based on ISO 10315:2000 SM/080 based on ISO 10362-1:1999
	Calculated value:	
	Nicotine free dry particulate matter (NFDPM)	Determined from Total Particulate Matter, Nicotine and Water values
Mainstream Cigarette Smoke, (ISO smoking regimes)	pH	SM/150 (in-house method) using smoke collected on Linear or Rotary Smoking Machines
Mainstream Cigarette Smoke, (collected by either ISO or Health Canada Intense smoking regimes)	Menthol	SM/130 based on SO 13110:2012 using smoke collected on Linear Smoking Machines

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CIGARETTES (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods based on National or International Standards, industry standards or in-house developed
Mainstream Cigarette Smoke, (collected by either ISO or Health Canada Intense smoking regimes) (cont'd)	Benzo[a]pyrene	SM/140 based on ISO 22634:2008 by GC-MS or GC-MS/MS using smoke collected on Linear or Rotary Smoking Machines
	Tobacco specific nitrosamines (TSNA's)	SM/160 based on Coresta Reference Method No. 75 by LC-MS/MS using smoke collected on Linear Smoking Machines
Mainstream Cigarette Smoke, (ISO smoking regimes)	Total oxides of nitrogen as nitric oxide	SM/190 using NOx analyser using smoke collected on Rotary Smoking Machines
Mainstream Cigarette Smoke, (collected by either ISO or Health Canada Intense smoking regimes)	Carbonyls: Acetone Acetaldehyde Acrolein n-Butyraldehyde Methyl ethyl ketone Crotonaldehyde Formaldehyde Propionaldehyde	SM/170 based on Coresta Reference Method No. 74 by HPLC with UV detection using smoke collected on Rotary Smoking Machines
	Acetamide and acrylamide	SM/250 (in-house method) using LC/MS-MS using smoke collected on Linear Smoking Machines
	Ammonia	SM/220 based on Health Canada Method T-101 using ion chromatography using smoke collected on Rotary Smoking Machines
	Aromatic amines: 1-aminonaphthalene 2-aminonaphthalene 3-aminobiphenyl 4-aminobiphenyl	SM/260 (in-house method) using LC/MS-MS using smoke collected on Linear Smoking Machines

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CIGARETTES (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods based on National or International Standards, industry standards or in-house developed
Mainstream Cigarette Smoke, (collected by either ISO or Health Canada Intense smoking regimes) (cont'd)	Aromatic amines: o-toluidine o-anisidine 2,6-dimethylaniline	SM/280 in-house method using LC/MS-MS using smoke collected on Linear Smoking Machines
	Selected aza-arenes: 2-amino-3-methyl-3H-imidazo-[4,5-f]quinoline 2-aminop-3-methyl-9H-pyrido[2,3-b]indole 3-amino-1-methyl-5H-pyrido[4,3-b]indole 3-amino-1,4-dimethyl-5H-pyrido[4,3-b]indole 2-amino-1-methyl-6-phenyl-imidazo[4,5-b]pyridine 2-amino-6-methyldipyrido[1,2-a:3',3'-d]imidazole 2-amino-9H-pyrido[2,3-b]indole	SM/320 in-house method using LC/MS-MS using smoke collected on Linear Smoking Machines
	Caffeic acid	SM/300 in-house method using LC/MS-MS using smoke collected on Rotary Smoking Machines
	Ethyl carbamate	SM/310 in-house method using LC/MS-MS using smoke collected on Linear Smoking Machines
	Hydrazine	SM/290 in-house method using GC/MS using smoke collected on Rotary Smoking Machines
	Hydrogen cyanide	SM/210 based on HCTM No. T-107 using continuous flow analyser using smoke collected on Linear or Rotary Smoking Machines

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CIGARETTES (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods based on National or International Standards, industry standards or in-house developed
Mainstream Cigarette Smoke, (collected by either ISO or Health Canada Intense smoking regimes) (cont'd)	Selected chlorinated dioxins and furans: 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) 1,2,3,7,8-pentachlorodibenzo-p-dioxin (1,2,3,7,8-PCDD) 1,2,3,4,7,8-hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD) 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD) octachlorodibenzo-p-dioxin (OCDD) 1,2,3,6,7,8-hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD) 1,2,3,7,8,9-hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD) 2,3,7,8-tetrachlorodibenzofuran (2,3,7,8-TCDF) 1,2,3,7,8-pentachlorodibenzofuran (1,2,3,7,8-PCDF) 1,2,3,4,7,8-hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF) 1,2,3,4,6,7,8-heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF) octachlorodibenzofuran (OCDF) 2,3,4,7,8-pentachlorodibenzofuran (2,3,4,7,8-PCDF) 1,2,3,6,7,8-hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF) 1,2,3,7,8,9-hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF) 2,3,4,6,7,8-hexachlorodibenzofuran (2,3,4,6,7,8-HxCDF) 1,2,3,4,7,8,9-heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)	SM/270 in-house method using GC/MS using smoke collected on Rotary Smoking Machines

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CIGARETTES (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods based on National or International Standards, industry standards or in-house developed
Mainstream Cigarette Smoke, (collected by either ISO or Health Canada Intense smoking regimes) (cont'd)	Polycyclic aromatic hydrocarbons: Naphathalene Benzo[c]phenanthrene Benz[a]anthracene Benz[j]aceanthrylene Cyclopenta[cd]pyrene Chrysene 5-Methylchrysene Benzo[b]fluoranthrene Benzo[k]fluoranthrene Benzo[a]pyrene Indeno[1,2,3-cd]pyrene Dibenzo[a,l]pyrene Dibenzo[a,e]pyrene Dibenzo[a,i]pyrene Dibenzo[a,h]pyrene Dibenz[a,h]anthracene	SM/200 based on ISO 22634:2008 (benzo[a]pyrene in smoke) by GC/MS-MS using smoke collected on Rotary Smoking Machines
	Semi-volatile organic compounds: Pyridine Styrene 2,3-Benzofuran Nitrobenzene Quinoline	SM/350 by GC-MS using smoke collected on Linear Smoking Machines
	Selected volatile nitrosamines: N-nitrosodimethylamine N-nitrosodiethylmethylamine N-nitrosodiethylamine N-nitrosopiperidine	SM/330 in-house method by GC-MS using smoke collected on Rotary Smoking Machines
	Selected volatile nitrosamines: N-nitrososarcosine N-nitrosodiethanolamine	SM/340 in-house method using LC/MS-MS using smoke collected on Linear Smoking Machines

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CIGARETTES (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods based on National or International Standards, industry standards or in-house developed
Mainstream Cigarette Smoke, (collected by either ISO or Health Canada Intense smoking regimes) (cont'd)	Volatile organic compounds: Vinyl chloride 1,3-Butadiene Ethylene oxide Propylene oxide Isoprene Furan Vinyl acetate Acrylonitrile Benzene Nitromethane 2-Nitropropane Toluene Ethyl benzene	SM/240 based on Coresta Reference Method No. 70 method by GC-MS using smoke collected on Rotary Smoking Machines
Mainstream Cigarette Smoke, (ISO smoking regimes)	Phenols: Catechol m & p-Cresol o-Cresol Hydroquinone Phenol Resorcinol	SM/087 (in-house method) using HPLC with fluorescence detection using smoke collected on Linear Smoking Machines
Sidestream Cigarette Smoke (collected by ISO smoking regime)	Smoking for collection of sidestream smoke for:	SS/005 using Linear Smoking Machine
	Carbon Monoxide	SS/020 based on ISO 20774:2007
	Tobacco specific nitrosamines (TSNA's)	SS/040 based on Coresta Reference Method No. 75 by LC-MS/MS
	Carbonyls: Acetone Acetaldehyde Acrolein n-Butyraldehyde Methyl ethyl ketone Crotonaldehyde Formaldehyde Propionaldehyde	SS/050 based on Coresta Reference Method No. 74 by HPLC with UV detection
	Benzo[a]pyrene	SS/060 based on ISO 22634:2008 by GC/MS-MS

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CIGARETTES (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods based on National or International Standards, industry standards or in-house developed
Sidestream Cigarette Smoke (cont'd)	Phenols: Catechol m & p-Cresol o-Cresol Hydroquinone Phenol Resorcinol	SS/030 (in-house method) using HPLC with fluorescence detection
Cigarette Filters	Retention of Particulate Matter and Nicotine	SM/010 SM/020 SM/040 SM/070 SM/080 SM/100
CIGARETTES	Physical Tests	Documented In-House Methods based on National and International Standards
Cigarettes and Cigarette Filters	Weight Pressure drop Paper Porosity Length	PM/040 based on ISO 4387:2000 PM/030 based on ISO 6565:2015 PM/050 based on ISO 2965:2009 PM/070 based on ISO 4387:2000
	Pressure drop/Draw resistance Percentage ventilation Circumference/Diameter	PM/015 based on ISO 6565:2015 and ISO 9512:2002 and ISO 2971:1998
Cigarettes	Ignition propensity	IP/010 based on ISO 12863:2010 and ASTM E2187-04

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SMOKELESS NICOTINE DELIVERY PRODUCTS (e-cigarettes, electronic cigarettes, vaping devices)	<u>Chemical Tests</u>	Documented In-House Methods based on industry standard methods
Smokeless nicotine delivery vapour / aerosol	Carbonyls: Acetone Acetaldehyde Acrolein n-Butyraldehyde Methyl ethyl ketone Crotonaldehyde Formaldehyde Propionaldehyde Diacetyl Acetyl propionyl	EM/0/20 vapour generation and collection followed by EM/040 based on Coresta Reference Methods No. 81 and 74 by UPLC with UV detection using smoke collected on Linear Smoking Machine
	Water Nicotine Menthol Propylene Glycol Glycerol Anabasine Ethylene Glycol Diethylene Glycol	EM 060 in house method using linear smoking machine and GC-MS, GC-TCD and GC-FID
	N-Nitrosonornicotine (NNN) N-Nitrosoanatabine (NAT) N-Nitrosoanabasine (NAB) 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)	EM 080 in house method using linear smoking machine and LC-MS/MS
Electronic cigarette liquid	<u>Chemical Tests</u>	
	Nicotine Water Menthol Glycerol Ethylene glycol Diethylene glycol Propylene glycol	EM/050 in-house method by GC with FID, TCD and MS detection
	N-Nitrosonornicotine (NNN) N-Nitrosoanatabine (NAT) N-Nitrosoanabasine (NAB) 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK	EM 070 using LC-MS/MS

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
TOBACCO	Chemical Tests	Documented In-House Methods based on National or International Standards, industry standards or in-house developed
	Moisture	HT/05 by oven drying (in-house method)
	Reducing substances	HT/130 by continuous flow analysis based on ISO 15153:2003
	Polycyclic aromatic hydrocarbons: Benz[a]anthracene Chrysene Benzo[b]fluoranthrene Benzo[k]fluoranthrene Benzo[a]pyrene Indeno[1,2,3-cd]pyrene Dibenzo[a,h]pyrene	HT/140 based on Labstat International ULC Method SSPT30 by GC/MS-MS
	Benzo[a]pyrene	HT/150 based on Labstat International ULC Method SSPT30 by GC/MS-MS
	Total alkaloids	HT/160 by continuous flow analysis based on ISO 15152:2003
	Aflatoxin B_1	HT/180 (in-house method) by HPLC with pre-column derivatisation
	Ammonia	HT/20 by ion chromatography based on CORESTA method No.73
	Carbonyls: Acetaldehyde Crotonaldehyde Formaldehyde	HT/60 in-house method by HPLC with UV detection
	Caffeic acid	HT/200 in-house method by HPLC
	Coumarin	HT/90 in-house method by LC/MS-MS
	Ethyl carbamate	HT/100 in-house method by LC/MS-MS

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
TOBACCO	<u>Chemical Tests</u>	Documented In-House Methods based on National or International Standards, industry standards or in-house developed
	Nicotine and alkaloids: Anatabine Anabasine Myosmine Nicotine Nornicotine	HT/190 (in-house method) by GC/MS
	pH	HT/10 following Aqueous extraction based on CORESTA method No.69
	Selected volatile nitrosamines: N-nitrosodimethylamine N-nitrosomorpholine N-nitrosopiperidine N-nitrosopyrrolidine	HT/70 in-house method by GC-MS
	Selected volatile nitrosamines: N-nitrososarcosine N-nitrosodiethanolamine	HT/80 in-house method using LC/MS-MS
	Tobacco specific nitrosamines (TSNA's)	HT/40 based on Coresta Reference Method No. 72 by LC-MS/MS
	Mercury	HT/50 (in-house method) using DMA mercury analyser
Tobacco and Tobacco Products	Flavour, Humectant and Plasticiser compounds: Propylene Glycol Menthol n-Decanol Triacetin Eugenol Glycerol Triethylene Glycol	HT/210 based on Coresta Reference Method No. 60 method using GC/MS
	Nitrate Nitrite Sorbic Acid Propionic Acid	HT/220 in-house method using ion chromatography with conductivity and UV detection.
END		