Schedule of Accreditation

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Accredited to ISO/IEC 17025:2017

SGS Analytics United Kingdom Limited

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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
FOODS AND FOOD PRODUCTS and ENVIRONMENTAL SWABS	<u>Molecular Biology Tests</u>	
	Meat Speciation. Qualitative detection of mitochondrial DNA from: Chicken, cow, goat, horse, pig, sheep and turkey	MEAT001 using manual extraction, PCR and QIAxcel electrophoresis
	Meat speciation (detection of DNA)	
	Amphibians, Birds, Mammals and Reptiles	DNA extraction using in house procedures according to procedure NGS1001 PCR amplification NGS 1002 using next generation sequencing using Ion Torrent PGM. Data analysis using procedure NGS1006
	Fish species	DNA extraction using in house procedures according to procedure NGS1001 PCR amplification NGS 1007 using next generation sequencing using Ion Torrent PGM. Data analysis using procedure NGS1006
	<u>Chemistry Tests</u>	
	Ash	CHEM014 based on BS 4401 Part 1 1998 by gravimetric determination

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOODS AND FOOD PRODUCTS (including Beverages and Water)	Chemistry Tests (cont'd)	Documented In-house Methods:
	Dietary fibre	CHEM012 based on AOAC Method 991.43
	Fat (total)	1. CHEM015 by acid hydrolysis based on BS 4401 Part 4: 1970 2. CHEM022 using Oracle Rapid NMR Fat Analyzer
	Fatty acid profile: - saturated - monounsaturated - polyunsaturated - trans fatty acids - omega-3 fatty acids	CHEM016 based on AOAC 996.06 using gas chromatography
	Hydroxyproline	CHEM018 based on BS 4401 Part 11: 1995
	Moisture	CHEM013 by gravimetric determination
	Nitrogen and protein by calculation	CHEM024 by Dumas Nitrogen analyser
	Sodium	CHEM009 by atomic emission spectroscopy
	Sugars: - Total - Fructose - Glucose - Galactose - Lactose - Maltose - Sucrose	CHEM011 by HPLC

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOOD and FOOD PRODUCTS BEVERAGES	Chemistry Tests (cont'd)	Documented In-house Methods:
	Determination of water activity (aW)	CHEM025 using AquaLab water activity meter
	Calculations based on results of accredited methods: - Added water - Apparent Fat Free Meat - Apparent Total Meat - Apparent Total Fish - Content - EU Meat Content - Total Carbohydrate - Carbohydrate (available) - Collagen - Collagen Protein Ratio - Excess Connective Tissue - Excess Fat - Total Energy - Salt (sodium chloride) - Salt in aqueous phase	CHEM020 by calculation
	Determination of pH	CHEM007 using Denver 225 using pH/ion meter
Brines, Dairy Products, Fish and Fish Products, Meat and Meat Products, Mycoprotein Products	Chloride (including salt by calculation)	CHEM023 based on BS 4401-6:1996 (Volhard method)
ENVIRONMENTAL SWABS	Microbiological Tests	Documented In-house Methods:
	Detection of: *Campylobacter* spp., confirmed	MIC1024 based on BS EN ISO 10272-1:2017 confirmed using MALDI TOF MIC 1080
	Escherichia coli O157 specific DNA (presumptive)	MIC 1072 enrichment and PCR assay based on PD CEN ISO/TS 13136:2012 using spin column manual or QIAgen, QIAxtractor automated extraction, PCR and QIAxcel electrophoresis. Positive results confirmed using 16S DNA sequencing procedure MIC 1011

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
ENVIRONMENTAL SWABS (cont'd)	Microbiological Tests (cont'd)	Documented In-house Methods:
	Detection of: (cont'd)	
	Listeria species including *Listeria monocytogenes*	MIC1077 in-house documented method using LESS plus broth, confirmed using MALDI TOF MIC 1080
	Salmonella spp., confirmed	MIC1023 based on BS EN ISO 6579-1:2017 + A1:2007 identified using MALDI TOF 1080
	Salmonella spp specific DNA	MIC1046 using spin column extraction, and /or QIAgen QIAxtractor automated extraction, PCR and QIAxcel electrophoresis
	Enumeration of:	
	Aerobic Colony Count at 30°C	1) MIC1004 based on BS EN ISO 4833-1:2013 at 72 hours 2) MIC1004 at 48 hours (client specified)
	Coliforms at 37°C (presumptive)	MIC1017 based on BS ISO 4832:2006
	Enterobacteriaceae (presumptive)	MIC1018 based on BS ISO 21528-2:2017
	ß-glucuronidase positive *Escherichia coli*	1) MIC1022 based on BS ISO 16649-2:2001 2) MIC1047 customer specified method
	Lactic Acid Bacteria (presumptive)	MIC1045 based on BS ISO 15214:1998

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
ENVIRONMENTAL SWABS (cont'd)	Microbiological Tests (cont'd)	Documented In-house Methods:
	Enumeration of: (cont'd)	
	Coagulase-positive *Staphylococcus* (confirmed)	MIC1021 based on BS EN ISO 6888-1:1999+A2:2018, confirmed using Prolab or Oxoid Staphytest latex agglutination kits
	Yeasts and Moulds	MIC1005 based on BS ISO 21527-1:2008 using DRBC agar for foods >0.95 Aw
DAIRY PRODUCTS	Enumeration of:	
	Aerobic Colony Count at 30°C	1) MIC1004 based on BS EN ISO 4833-1:2013, using MPCA at 72 hours 2) MIC1004 at 48 hours (client specified)
	Pseudomonas species (presumptive)	MIC1025 based on BS EN ISO 13720:2010
FOODS and FOOD PRODUCTS (general unless specified)	Detection of:	
	Campylobacter spp., confirmed	MIC1024 based on BS EN ISO 10272-1:2017 confirmed using MALDI TOF MIC 1080
	Escherichia coli O157 specific DNA (presumptive)	MIC 1072 enrichment and PCR assay based on PD CEN ISO/TS 13136:2012 using spin column manual or QIAgen QIAxtractor automated extraction, PCR and QIAxcel electrophoresis. Positive results confirmed using 16S DNA sequencing procedure MIC 1011

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOODS and FOOD PRODUCTS (general unless specified) (cont'd)	Microbiological Tests (cont'd)	Documented In-house Methods
	Detection of (cont'd):	
	Listeria species including *Listeria monocytogenes*	MIC1077 in-house documented Method using LESS plus broth, confirmed MALDI TOF 1080
	Salmonella spp, confirmed	MIC1023 based on BS EN ISO 6579-1:2017 identified using MALDI TOF MIC1080
	Salmonella spp specific DNA	MIC1046 using spin column extraction, and /or QIAgen QIAxtractor automated extraction, PCR and QIAxcel electrophoresis
	Enumeration of:	
	Aerobic Colony Count at 30°C	1) MIC1004 based on BS EN ISO 4833-1:2013 at 72 hours 2) MIC1004 at 48 hours (client specified)
	Clostridium perfringens	MIC1027 based on BS ISO 7937:2004 and customer specified method, confirmed using 16S DNA sequencing procedure MIC1011
	Coliforms at 37°C (presumptive)	MIC1017 based on BS ISO 4832:2006
	Enterobacteriaceae (presumptive)	MIC1018 based on BS ISO 21528-2:2017
	ß-glucuronidase positive *Escherichia coli*	1) MIC1022 based on BS ISO 16649-2:2001 2) MIC1047 based BS ISO 16649-2:2001 and customer specified method
	Lactic Acid Bacteria (presumptive)	MIC1045 based on BS ISO 15214:1998

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOODS and FOOD PRODUCTS (general unless specified) (cont'd)	Microbiological Tests (cont'd)	Documented In-house Methods
	Enumeration of (cont'd):	
	Listeria species including *L. monocytogenes*	MIC1020 based on BS EN ISO 11290-2:2017, identified using MALDI TOF MIC1080
	Coagulase-positive *Staphylococcus* (confirmed)	MIC1021 based on BS EN ISO 6888-1:1999+A2:2018, confirmed using Prolab or Oxoid Staphytest latex agglutination kits
	Sulphite reducing Clostridia (presumptive and confirmed)	MIC1056 based on BS ISO 15213:2003 with confirmation using DNA sequencing procedure MIC1011/1012
	Yeasts and Moulds	1) MIC1005 based on BS ISO 21527-1:2008 using DRBC agar for foods >0.95 Aw 2) MIC1005 based on BS ISO 21527-2:2008 using DG18 agar for foods < 0.95 Aw 3) MIC1005 based on BS ISO 21527-1:2008 using OSA agar for fruit juices and beverages
Breads, Dried Foods, Grains (cooked/uncooked), Condiments/Sauces & Dairy	*Bacillus cereus* (presumptive)	MIC1026 based on BS EN ISO 7932:2004+A1 :2020
Chicken & Chicken containing products	*Campylobacter* spp., confirmed	MIC1076 based on BS EN ISO 10272-2:2017 confirmation by MALDI TOF MIC 1080
Meats & Meat Products	*Pseudomonas* species (presumptive)	MIC1025 based on BS EN ISO 13720:2010

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOODS and FOOD PRODUCTS (general unless specified) (cont'd)	Microbiological Tests (cont'd) Detection of:	Documented In-house Methods
Sea fish and Seafood Products	*Vibrio parahaemolyticus* and *Vibrio cholerae*	MIC1048 based on BS EN ISO 21872-1:2017 and customer specified method, confirmed with API 20NE or MALDI TOF MIC 1080
MICROBIAL CULTURES	DNA Sequencing	Documented In-house Methods:
	Microbial identification	MIC1011/1012 using 16S/28S DNA sequencing using ABI3730 DNA sequencer and ABI Microseq Database
	Microbiological Tests	Documented In-House Methods
Presumptive culture isolates originating from test methods:		MIC1080 identification by MALDI TOF Bruker BioTyper
Listeria: MIC1020 MIC1077	Characterisation and identification to *Listeria* species level (including *L. monocytogenes)*	
Salmonella: MIC1023	Characterisation and identification to *Salmonella* genus level	
Campylobacter: MIC1024 MIC1076	Characterisation and identification to *Campylobacter* genus level	
Coliforms: MIC1017 MIC 1068	Characterisation of coliform isolates Charaterisation and identification of coliform isolates	
Vibrio: MIC1048	Characterisation and identification to *Vibrio* genus level	

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
WATERS Drinking waters	<u>Microbiological Tests</u> Enumeration of:	Documented In-House Methods:
	Total Aerobic Counts at 22°C and 37°C	MIC1028 based on the Microbiology of Drinking Water (2020) Part 7
(including bottled mineral water)	Coliforms and *Escherichia coli*	MIC1068 based on the Microbiology of Drinking Water (2016) Part 4B E. coli confirmed using DNA sequencing procedures MIC1011/1012 Coliforms confirmed using MALDI TOF MIC 1080
	Enterococci (Faecal Streptococci)	MIC1031 based on the Microbiology of Drinking Water (2012) Part 5 and BS ISO7899-2:2012
	Pseudomonas aeruginosa (confirmed)	MIC1033 based on Microbiology of Drinking Water (2015) Part 8
	Sulphite reducing Clostridia	MIC1032 based on Microbiology of Drinking Water (2015) Part 6a
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