


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 1901 Accredited to ISO/IEC 17025:2017	Chivas Brothers Ltd	
	Issue No: 026 Issue date: 24 October 2022	
	Station Road Keith Banffshire Scotland AB55 5BU	Contact: Mr Alan Rettie Tel: +44 (0) 1542 783100 E-Mail: alan.rettie@pernod-ricard.com
Testing performed by the Organisation at the locations specified		

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Address Brands Technical Centre-North Station Road Keith Banffshire Scotland AB55 5BU	Local contact Contact: Mr Alan Rettie Tel: +44 (0) 1542 783100 E-Mail: alan.rettie@pernod-ricard.com	<u>Testing</u> Chemical <u>Support Functions</u> Quality Management
Address Brands Technical Centre-South Kilmalid Stirling Road Dumbarton Scotland G82 2SS	Local contact Contact: Mr Alan Rettie Tel: +44 (0) 1542 783100 E-Mail: alan.rettie@pernod-ricard.com	<u>Testing</u> Chemical



1901

Accredited to
ISO/IEC 17025:2017

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

Chivas Brothers Limited

Issue No: 026 Issue date: 24 October 2022

Testing performed by the Organisation at the locations specified

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ALCOHOLIC BEVERAGES	<u>Chemical Tests</u>	Documented In-House Methods identified by procedure number	
Liqueurs, Spirits, Spirit Drinks and intermediate production process samples.	Alcoholic strength (apparent)	BTCP-4003 by densitometry	A, B
	Alcoholic strength (actual)	BTCP-4003 by distillation followed by densitometry	A, B
Liqueurs, Spirits, Spirit Drinks and intermediate production process samples.	Colour (Tint)	BTCP-4012 by Spectrophotometer absorbance at 525nm	A, B
	Determination of Ethyl carbamate: CAS No. 51-79-6	BTCP-4004 by Gas Chromatography-Mass Spectrometry (GC/MS)	A, B
	Determination of Higher Alcohols, Esters and Aldehydes: CAS No. Acetaldehyde 75-07-0 Methanol 67-56-1 Acetal 105-57-7 Ethyl acetate 141-78-6 n-Propanol 71-23-8 iso-Butanol 78-83-1 iso- Amyl Acetate 123-92-2 2-Methyl butanol 1565-80-6 3-Methyl butanol 123-51-3 Ethyl Caproate 123-66-0 Ethyl lactate 687-47-8 Furfural 98-01-1	BTCP-4006 by Gas Chromatography Flame Ionisation Detector (GC-FID)	A, B



1901

Accredited to
ISO/IEC 17025:2017

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

Chivas Brothers Limited

Issue No: 026 Issue date: 24 October 2022

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code																																														
ALCOHOLIC BEVERAGES	<u>Chemical Tests</u>	Documented In-House Methods identified by procedure number																																															
Liqueurs, Spirits, Spirit Drinks and intermediate production process samples. (cont'd)	Determination of Esters, Acids and Alcohols: <table border="0"> <tr> <td></td> <td style="text-align: right;">CAS No.</td> </tr> <tr> <td>Ethyl caprylate</td> <td style="text-align: right;">106-32-1</td> </tr> <tr> <td>Acetic acid</td> <td style="text-align: right;">64-19-7</td> </tr> <tr> <td>Propionic acid</td> <td style="text-align: right;">79-09-4</td> </tr> <tr> <td>Isobutyric acid</td> <td style="text-align: right;">79-31-2</td> </tr> <tr> <td>Ethyl caprate</td> <td style="text-align: right;">110-38-3</td> </tr> <tr> <td>Isovaleric acid</td> <td style="text-align: right;">503-74-2</td> </tr> <tr> <td>Phenyl ethyl acetate</td> <td style="text-align: right;">103-45-7</td> </tr> <tr> <td>Ethyl laurate</td> <td style="text-align: right;">106-33-2</td> </tr> <tr> <td>Caproic acid</td> <td style="text-align: right;">142-62-1</td> </tr> <tr> <td>2-phenyl ethanol</td> <td style="text-align: right;">60-12-8</td> </tr> <tr> <td>Ethyl myristate</td> <td style="text-align: right;">124-06-1</td> </tr> <tr> <td>Caprylic acid</td> <td style="text-align: right;">124-07-2</td> </tr> <tr> <td>Pelargonic acid</td> <td style="text-align: right;">112-05-0</td> </tr> <tr> <td>Ethyl palmitate</td> <td style="text-align: right;">628-97-7</td> </tr> <tr> <td>Capric acid</td> <td style="text-align: right;">334-48-5</td> </tr> <tr> <td>Ethyl palmitoleate</td> <td style="text-align: right;">54546-22-4</td> </tr> <tr> <td>Cetyl Alcohol</td> <td style="text-align: right;">36653-82-4</td> </tr> <tr> <td>Ethyl Stearate</td> <td style="text-align: right;">111-61-5</td> </tr> <tr> <td>Ethyl Oleate</td> <td style="text-align: right;">111-62-6</td> </tr> <tr> <td>Lauric Acid</td> <td style="text-align: right;">143-07-7</td> </tr> <tr> <td>Ethyl linoleate</td> <td style="text-align: right;">544-35-4</td> </tr> <tr> <td>Ethyl linolenate</td> <td style="text-align: right;">1191-41-9</td> </tr> </table>		CAS No.	Ethyl caprylate	106-32-1	Acetic acid	64-19-7	Propionic acid	79-09-4	Isobutyric acid	79-31-2	Ethyl caprate	110-38-3	Isovaleric acid	503-74-2	Phenyl ethyl acetate	103-45-7	Ethyl laurate	106-33-2	Caproic acid	142-62-1	2-phenyl ethanol	60-12-8	Ethyl myristate	124-06-1	Caprylic acid	124-07-2	Pelargonic acid	112-05-0	Ethyl palmitate	628-97-7	Capric acid	334-48-5	Ethyl palmitoleate	54546-22-4	Cetyl Alcohol	36653-82-4	Ethyl Stearate	111-61-5	Ethyl Oleate	111-62-6	Lauric Acid	143-07-7	Ethyl linoleate	544-35-4	Ethyl linolenate	1191-41-9	BTCP-4015 by Gas Chromatography Mass Spectrometry (GC-MS)	A, B
	CAS No.																																																
Ethyl caprylate	106-32-1																																																
Acetic acid	64-19-7																																																
Propionic acid	79-09-4																																																
Isobutyric acid	79-31-2																																																
Ethyl caprate	110-38-3																																																
Isovaleric acid	503-74-2																																																
Phenyl ethyl acetate	103-45-7																																																
Ethyl laurate	106-33-2																																																
Caproic acid	142-62-1																																																
2-phenyl ethanol	60-12-8																																																
Ethyl myristate	124-06-1																																																
Caprylic acid	124-07-2																																																
Pelargonic acid	112-05-0																																																
Ethyl palmitate	628-97-7																																																
Capric acid	334-48-5																																																
Ethyl palmitoleate	54546-22-4																																																
Cetyl Alcohol	36653-82-4																																																
Ethyl Stearate	111-61-5																																																
Ethyl Oleate	111-62-6																																																
Lauric Acid	143-07-7																																																
Ethyl linoleate	544-35-4																																																
Ethyl linolenate	1191-41-9																																																
	Determination of N-Nitrosodimethylamine: CAS No.62-75-9	BTCP-4005 by Gas Chromatography Nitrogen Chemiluminescence Detection (GC-NCD)	A, B																																														
	Determination of Sugars: <table border="0"> <tr> <td></td> <td style="text-align: right;">CAS No.</td> </tr> <tr> <td>Arabinose</td> <td style="text-align: right;">5328-37-0</td> </tr> <tr> <td>Fructose</td> <td style="text-align: right;">57-48-7</td> </tr> <tr> <td>Glucose</td> <td style="text-align: right;">50-99-7</td> </tr> <tr> <td>Lactose</td> <td style="text-align: right;">63-42-3</td> </tr> <tr> <td>Sucrose</td> <td style="text-align: right;">57-50-1</td> </tr> </table>		CAS No.	Arabinose	5328-37-0	Fructose	57-48-7	Glucose	50-99-7	Lactose	63-42-3	Sucrose	57-50-1	BTCP-4009 by Ion Chromatography Pulsed Amperometric Detection (IC-PAD)	A																																		
	CAS No.																																																
Arabinose	5328-37-0																																																
Fructose	57-48-7																																																
Glucose	50-99-7																																																
Lactose	63-42-3																																																
Sucrose	57-50-1																																																



1901

Accredited to
ISO/IEC 17025:2017

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

Chivas Brothers Limited

Issue No: 026 Issue date: 24 October 2022

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code																																																
ALCOHOLIC BEVERAGES	<u>Chemical Tests</u>	Documented In-House Methods identified by procedure number																																																	
Liqueurs, Spirits, Spirit Drinks and intermediate production process samples. (cont'd)	Determination of Phenolic Aldehydes / Acids derived from wood (Cask Extractives): <table style="width: 100%; border: none;"> <tr><td></td><td style="text-align: right;">CAS No.</td></tr> <tr><td>Coniferaldehyde</td><td style="text-align: right;">458-36-6</td></tr> <tr><td>Gallic acid</td><td style="text-align: right;">149-91-7</td></tr> <tr><td>5-Hydroxymethylfurfural</td><td style="text-align: right;">67-47-0</td></tr> <tr><td>Scopoletin</td><td style="text-align: right;">92-61-5</td></tr> <tr><td>Sinapaldehyde</td><td style="text-align: right;">4206-58-0</td></tr> <tr><td>Syringic acid</td><td style="text-align: right;">530-57-4</td></tr> <tr><td>Syringic aldehyde</td><td style="text-align: right;">134-96-3</td></tr> <tr><td>Vanillic acid</td><td style="text-align: right;">121-34-6</td></tr> <tr><td>Vanillin</td><td style="text-align: right;">121-33-5</td></tr> </table>		CAS No.	Coniferaldehyde	458-36-6	Gallic acid	149-91-7	5-Hydroxymethylfurfural	67-47-0	Scopoletin	92-61-5	Sinapaldehyde	4206-58-0	Syringic acid	530-57-4	Syringic aldehyde	134-96-3	Vanillic acid	121-34-6	Vanillin	121-33-5	BTCP-4501 by High Performance Liquid Chromatography Multi-Wavelength Detection (HPLC-MWD)	A																												
	CAS No.																																																		
Coniferaldehyde	458-36-6																																																		
Gallic acid	149-91-7																																																		
5-Hydroxymethylfurfural	67-47-0																																																		
Scopoletin	92-61-5																																																		
Sinapaldehyde	4206-58-0																																																		
Syringic acid	530-57-4																																																		
Syringic aldehyde	134-96-3																																																		
Vanillic acid	121-34-6																																																		
Vanillin	121-33-5																																																		
Liqueurs, Spirits, Spirit Drinks, intermediate production process, samples and ethanolic simulants.	Determination of Metals: <table style="width: 100%; border: none;"> <tr><td></td><td style="text-align: right;">CAS No.</td></tr> <tr><td>Aluminium</td><td style="text-align: right;">7429-90-5</td></tr> <tr><td>Arsenic</td><td style="text-align: right;">7440-38-2</td></tr> <tr><td>Beryllium</td><td style="text-align: right;">7440-41-7</td></tr> <tr><td>Calcium</td><td style="text-align: right;">7440-70-2</td></tr> <tr><td>Cadmium</td><td style="text-align: right;">7440-43-9</td></tr> <tr><td>Cobalt</td><td style="text-align: right;">7440-48-4</td></tr> <tr><td>Chromium</td><td style="text-align: right;">7440-47-3</td></tr> <tr><td>Copper</td><td style="text-align: right;">7440-50-8</td></tr> <tr><td>Iron</td><td style="text-align: right;">7439-89-6</td></tr> <tr><td>Potassium</td><td style="text-align: right;">7440-09-7</td></tr> <tr><td>Lithium</td><td style="text-align: right;">7439-93-2</td></tr> <tr><td>Magnesium</td><td style="text-align: right;">7440-95-4</td></tr> <tr><td>Manganese</td><td style="text-align: right;">7440-96-5</td></tr> <tr><td>Molybdenum</td><td style="text-align: right;">7439-98-7</td></tr> <tr><td>Sodium</td><td style="text-align: right;">7440-23-5</td></tr> <tr><td>Nickel</td><td style="text-align: right;">7440-02-0</td></tr> <tr><td>Lead</td><td style="text-align: right;">7439-92-1</td></tr> <tr><td>Antimony</td><td style="text-align: right;">7440-36-0</td></tr> <tr><td>Tin</td><td style="text-align: right;">7440-31-5</td></tr> <tr><td>Strontium</td><td style="text-align: right;">7440-24-6</td></tr> <tr><td>Titanium</td><td style="text-align: right;">7440-32-6</td></tr> <tr><td>Vanadium</td><td style="text-align: right;">7440-62-2</td></tr> <tr><td>Zinc</td><td style="text-align: right;">7440-66-6</td></tr> </table>		CAS No.	Aluminium	7429-90-5	Arsenic	7440-38-2	Beryllium	7440-41-7	Calcium	7440-70-2	Cadmium	7440-43-9	Cobalt	7440-48-4	Chromium	7440-47-3	Copper	7440-50-8	Iron	7439-89-6	Potassium	7440-09-7	Lithium	7439-93-2	Magnesium	7440-95-4	Manganese	7440-96-5	Molybdenum	7439-98-7	Sodium	7440-23-5	Nickel	7440-02-0	Lead	7439-92-1	Antimony	7440-36-0	Tin	7440-31-5	Strontium	7440-24-6	Titanium	7440-32-6	Vanadium	7440-62-2	Zinc	7440-66-6	BTCP-4301 by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES)	A
	CAS No.																																																		
Aluminium	7429-90-5																																																		
Arsenic	7440-38-2																																																		
Beryllium	7440-41-7																																																		
Calcium	7440-70-2																																																		
Cadmium	7440-43-9																																																		
Cobalt	7440-48-4																																																		
Chromium	7440-47-3																																																		
Copper	7440-50-8																																																		
Iron	7439-89-6																																																		
Potassium	7440-09-7																																																		
Lithium	7439-93-2																																																		
Magnesium	7440-95-4																																																		
Manganese	7440-96-5																																																		
Molybdenum	7439-98-7																																																		
Sodium	7440-23-5																																																		
Nickel	7440-02-0																																																		
Lead	7439-92-1																																																		
Antimony	7440-36-0																																																		
Tin	7440-31-5																																																		
Strontium	7440-24-6																																																		
Titanium	7440-32-6																																																		
Vanadium	7440-62-2																																																		
Zinc	7440-66-6																																																		



1901

Accredited to
ISO/IEC 17025:2017

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

Chivas Brothers Limited

Issue No: 026 Issue date: 24 October 2022

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ALCOHOLIC BEVERAGES and ETHANOLIC SIMULANTS	<u>Chemical Tests</u> (cont'd)	Documented In-House Methods identified by procedure number	
Liqueurs, Spirits, Spirit Drinks	Analysis and related opinions and interpretations for the purpose of assessment of authenticity and adulteration	Standard operating procedure BTCP-4014 and related industry, Statutory Instruments and EC Regulations, own brand specification and comparison samples.	A, B
WATER: Process and Waste Water	Dissolved Copper (CAS No. 7440-50-8)	BTCP-4013 by Inductively Coupled Plasma Optical Emission Spectroscopy (ICPOES)	A
Effluent	Settled chemical oxygen demand Range 10 – 20,000 mg/l	STLP008 using Hach Lange kits	B
END			