

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Brewing Research International</h3>	
	<p>Issue No: 033</p>	<p>Issue date: 10 February 2012</p>
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<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
BEERS	<u>Chemical and Physical Tests</u>	Documented In-House Methods for the brewing industry and based on European Brewing Convention (EBC) methods where stated:
	Attenuation limit	AM/013 based on EBC Methods 4.11.3, 2004 and 9.7, 2000
	Acetaldehyde Dimethyl Sulphide Ethyl Acetate Ethyl Hexanoate Iso Amyl Acetate Iso Amyl Alcohol Iso Butanol Iso Butyl Acetate n-Butanol n-Propanol	AM/010 based on EBC Method 9.39, 2000 using Gas Chromatography
	Carbohydrate - total	AM/032 based on EBC Method 9.26, 1997 using the Anthrone-sulphuric Acid method
	Carbon Dioxide	AM/011 based on EBC Method 9.28.2, 1997 (archived)
	Diacetyl 2,3-Pentanedione	AM/008 based on EBC Method 9.24.2, 1999 using Gas Chromatography
	Energy Value	AM/034 based on EBC Method 9.45, 2005 by calculation
	Original Gravity	AM/019 based on EBC Method 9.4, 2004



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	<u>Chemical and Physical Tests</u> (cont'd)	Documented In-House Methods for the brewing industry and based on European Brewing Convention (EBC) methods where stated:
BEERS (cont'd)	Ethanol	1) AM/018 using Gas Chromatography 2) AM/019 based on EBC Methods 9.2.1, 2008 and 9.4, 2004 by distillation
CEREALS AND CEREAL PRODUCTS, BEERS	Mycotoxins HT-2 T-2 Aflatoxins B1, B2, G1, G2 Ochratoxin A Zearalenone	AM/043 using Immunoaffinity with LCMS-MS AM 050 using Immunoaffinity and HPLC
CEREALS AND CEREAL PRODUCTS, BEERS, MALT DERIVED DRINKS	Fumonisin B1, B2 Zearalenone Zearalenone Zearalenols	AM/041 using extraction SPE with LCMS-MS AM/047 using HPLC AM/048 using ASPEC LCMS-MS
CEREALS, BEERS and CIDERS	Aflatoxins B1, B2, G1, G2 Residual Ochratoxin A	AM/049 using ASPEC HPLC AM/046 using immunoaffinity column and HPLC
BEERS AND MALT DERIVED PRODUCTS, NON-ALCOHOLIC BEVERAGES	Benzene	AM/038 using SPME with GCMS-MS
WORT and BEER	Fermentability Free Amino Nitrogen	AM/013 based on EBC Methods 4.11.3, 2004 and 9.7, 2000 No AM/017 based on EBC Methods 8.10, 2002 and 9.10, 2000



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WORT and BEER (cont'd)	<u>Chemical and Physical Tests</u> (cont'd)	Documented In-House Methods for the brewing industry and based on European Brewing Convention (EBC) methods where stated:
	pH	AM/029 based on EBC Method 8.17, 1999 and EBC 9.35, 2004
	Total Soluble Nitrogen	AM/002 based on EBC Methods 8.9.2, 1999 and EBC 9.9.2, 2000 using an Automatic Nitrogen Analyser
	Viscosity at 20 °C	AM/027 based on EBC Method 8.4, 2004 and 9.38, 1997 using a rotary viscometer
MALTS, CEREALS, BREWING RAW MATERIALS and BEER	Apparent total N-Nitroso compounds	AM/030 using a Thermal Energy Analyser
	N-Nitrosodimethylamine (NDMA)	AM/031 using Gas Chromatography and a Thermal Energy Analyser
WORT AND BEER	Bitterness	AM/003 based on EBC Method 9.8, 2004
	Colour	AM/028 based on EBC Method 9.6, 2000
	Determination of Haze	AM/033 based on EBC Method 9.29, 1997 using the Dr Lange Beer photometer
	Specific (Present) Gravity	AM/006 based on EBC Methods 8.2.2, 2004 and 9.43.2, 2004 using a density meter
BEER, WORT AND SPENT GRAINS, CEREALS AND CEREAL PRODUCTS, HYDROLYSED VEGETABLE PROTEIN, SOUPS AND SAUCES, CHEESES AND DAIRY PRODUCTS, COOKED MEATS	3-Monochloropropanediol (3-MCPD) at 0.01-0.5 mg/kg	AM/037 based on AOAC Official Methods of Analysis, Method 2000.01 using Gas Chromatography Mass Spectrometry

