

LABORATORY

BROCHURE



EST.1887
MURPHY & SON

MURPHY HUB

LABORATORY

Led by **Science**
Powered by knowledge.



STATE-OF-THE-ART LABORATORIES

Testing carried out in our state-of-the-art specialist Chemistry & Microbiological laboratories, located in the International Centre for Brewing Science at the University of Nottingham.



SAFEGUARDING YOUR PRODUCTS

As a UKAS-accredited laboratory, we understand the importance of safeguarding your products. Our processes are audited and checked by UKAS standards, for impartiality, security and quality.



AUDIT TESTS


We provide a full range of tests required for HMRC, Trading Standard and SALSA audits, from ABV, Microbiology, Heavy Metals, ATNC through to Pathogen Testing (Full Micro).

UNLOCK EXCELLENCE
WITH EXPERT ANALYSIS


Driven by innovation and technology since 1887. We strive to provide a service that is unmatched in **quality**, led by **science**, and powered by **knowledge**.

Making the perfect beverage is both an art and a science. To ensure the highest quality in every batch, our state-of-the-art Chemistry and Microbiological Analysis Service provides an essential tool for brewers, cidermakers, winemakers, and distillers aiming to achieve perfection in their craft. Our precise analyses provide actionable insights, empowering our customers to make informed decisions for process improvement and flavour enhancement. Let precision be the **secret ingredient** in your pursuit of excellence.


Unlock The Murphy Secret

 **SUGAR TESTING**

Understand the sugar composition of your wort and detect residual sugars in final product - extremely useful in the production of no and low alcohol products.

 **GLUTEN ANALYSIS**

Don't risk it. Get it tested. We can help you achieve beers with less than 20 ppm of gluten with little or no noticeable difference in appearance and flavour.

 **MICROBIOLOGICAL EXAMINATION**

Detect and mitigate potential risks by examining the microbiological profile of your beverage. Our service helps you diagnose and address any potential problems.

How to order your Chemistry & Microbiological Tests

We have streamlined the process of ordering Chemistry and Microbiological tests to ensure that obtaining crucial insights for a seamless experience.

Step 1: Navigate to our website

Visit the lab service page by typing in the following link: www.murphyandson.co.uk/our-laboratory-services/chemistry-microbiological-tests/

Step 2: Download our Laboratory Sample Form

Please ensure you complete all the relevant information for the type of test you require.

Step 3: Provide Sample Details

Complete essential details about your samples, include information about the type of beverage, batch number and any specific consideration our experts should be aware of during the analysis.

Step 4: Posting Your Samples

Send your samples and a copy of the order form to:
The Laboratory, Murphy & Son, Alpine Street, Old Basford, Nottingham, NG6 0HQ
As of 21st July 2025 our new lab address will be:
Murphy & Son Technical Hub, Brewing and Biosciences Building, University of Nottingham Sutton Bonington Campus, Sutton Bonington, Loughborough, LE12 5RD

STEP 5: Receipt of Order & Payment

Once we receive your completed form and sample(s), we will be in touch with an order acknowledgement or proforma invoice (please ensure that proformas are paid promptly to avoid delays). Please note the turnaround times on certain tests such as ATNC's can take upto 2-3 weeks.

STEP 6: Receive Comprehensive Analysis Reports:

Once the analysis is complete, you will be sent a detailed report outlining the results of your Chemistry and Microbiological test. Our reports are designed to be easily understood giving valuable insights to help inform decisions in your process.

STEP 7: Expert Consultation

For any technical queries and follow up support, please contact us on techsupport@murphyandson.co.uk



LAB ANALYSIS

NAME OF TEST & DESCRIPTION	SAMPLE SIZE	TURN-AROUND TIME	CODE	PRODUCT CATEGORY
ABV Analysis by Anton Paar Alcolyzer ABV (UKAS Accredited), present gravity, original gravity analysed by the Anton Paar Alcolyzer	300 mL	3 - 5 days	LAB-ABVA	BEER
ABV Analysis by Anton Paar Alcolyzer ABV- (UKAS Accredited), present gravity, original gravity analysed by the Anton Paar Alcolyzer (three or more samples)	300 mL	3 - 5 days	LAB-ABVAM (3+)	BEER
ABV Analysis by Distillation ABV (UKAS Accredited for beers only), present gravity, original gravity analysed by distillation	500 mL	7 - 10 days	LAB-ABV	BEER CIDER SPIRITS
Bitterness Analysis Measurement of bitterness of in a beer/wort sample	100 mL	3 - 5 days	LAB-BU	BEER
Combined Analysis (Anton Paar Alcolyzer ABV) ABV, present gravity, original gravity, pH, colour and bitterness analysed by the Anton Paar Alcolyzer	500 mL	5 - 7 days	LAB-CAA	BEER
Combined Analysis (Anton Paar Alcolyzer ABV) ABV, present gravity, original gravity, pH, colour and bitterness analysed by the Anton Paar Alcolyzer (three or more samples)	500 mL	5 - 7 days	LAB-CADM (3+)	BEER
Measurement of Beer Colour Measurement of beer colour in EBC	50 mL	3 - 5 days	LAB-COLOUR	BEER
Free Amino Nitrogen Measurement of Free Amino Nitrogen in malt/wort/beer	100 mL	5 - 7 days	LAB-FAN	BEER
Gluten Samples Analysed by Elisa method R5 Gliadin Analysis (UKAS Accredited for beers only)	100 mL	3 - 5 days	LAB-GLUTEN	BEER
Gluten Fast Turnaround Analysed by Elisa method R5 Gliadin Analysis - Fast Turnaround (UKAS Accredited)	100 mL	1 - 2 days	LAB-GLUTEN-FAST	BEER
ATNC Analysis of Apparent Total Nitrosamine Compounds	500 mL	15 days	LAB-ATNC	BEER
NDMA (Nitrosodimethylamine) Analysis Analysis carried out to determine Nitrosodimethylamine Content	100 mL	15 days	LAB-NA	BEER
Elemental Analysis Single Element X 1 Element (metal ion)	100 mL	5 - 7 days	LAB-HMS	BEER WATER
Elemental Analysis Suite X 6 Elements analysed by ICP-OES. Arsenic, Cadmium, Copper, Iron, Mercury, Lead	100 mL	5 - 7 days	LAB-HM	BEER CIDER WATER SPIRITS
Ionics Analysis Calcium, Chloride, Sulphate and Magnesium in wort & beer	50 mL	5 - 7 days	LAB-IA	BEER
Liquor Analysis Calcium, Magnesium, Chloride, Sulphate, pH, Total Hardness as CaCO ₃ Alkalinity as CaCO ₃ and Nitrate	50 mL	7 - 10 days	LAB-FWA	BEER WATER
Liquor Analysis plus Sodium Calcium, Magnesium, Chloride, Sulphate, pH, Total Hardness as CaCO ₃ Alkalinity as CaCO ₃ , Nitrate and Sodium Analysis (LAB_HMS)	50 mL	7 - 10 days	LAB-FWA-NA	BEER WATER

LAB ANALYSIS

NAME OF TEST & DESCRIPTION	SAMPLE SIZE	TURN-AROUND TIME	CODE	PRODUCT CATEGORY
Shelf Life Analysis (Tannometer) Analysis of potential polyphenols & tannins by Tannometer - Filtered beer only	500 mL	7 - 10 days	LAB-TAN	BEER
Sulphur Dioxide Analysis (Total) Total Sulphur Dioxide Analysis. LOD is 2ppm	50 mL	5 - 7 days	LAB-SO2	BEER CIDER WINE
Carbon Dioxide Analysis in Beer The determination of dissolved carbon dioxide in small pack products	1 x small pack	5 - 7 days	LAB-CO2	BEER
Polyphenol Analysis in Beer Total Polyphenols analysis by Spectroscopy	1 x small pack	5 - 7 days	LAB-POLYPHENOL	BEER
Nutritional Analysis in Beer Samples Reported as Alcohol Content g/100 mL, Total Carbohydrate Content g/100 mL and Protein Content g/100 mL. Nutritional content reported in kcal energy/100 mL and kJ energy/100 mL	500 mL	7 - 10 days	LAB-NUTRITIONAL-ANALYSIS	BEER
Nutritional Analysis Plus Sugar (HPLC) Nutritional analysis of sugar content in beer	500 mL	5 - 7 days	LAB-NUTSUG	BEER
General Microbiological Check & Report General microscopy, yeast count, viability plus a written report	50 mL	1 - 2 days	LAB-MCHECK	BEER
Sample Analysis by Direct Plating 4 Types of media used. Cask/FV/unfiltered beer, wort and water samples	50 mL	3 - 5 days	LAB-MICRODP	BEER
Sample Analysis by real-time PCR Identify beer spoilage microorganisms present in yeast slurries, fermenters and packaged beer	100 mL	1 - 2 days	LAB-PCR	BEER
Sample Analysis by real-time PCR Identify beer spoilage microorganisms present in yeast slurries, fermenters and packaged beer	100 mL	1 - 2 days	LAB-PCR (3+)	BEER
Pesticide Screen Pesticide Screen	500 mL	14 days	LAB-PEST	BEER
Yeast Contamination Analysis Includes Direct Plating Analysis and Yeast Streak Plates	50 mL	3 - 5 days	LAB-YEASTC	BEER
Identification of <i>S. cerevisiae</i> var. <i>diastaticus</i> Enrichment and identification of <i>S. cerevisiae</i> var. <i>diastaticus</i> using real-time PCR	100 mL	3 - 5 days	LAB-DIASTATICUS	BEER
Sample Analysis by Membrane Filtration Filtered/Sterile Filtered beer samples	500 mL	3 - 5 days	LAB-MICROMF	BEER
Potassium Sorbate Potassium Sorbate testing	300 mL	5 - 7 days	LAB-POTSOR	BEER CIDER WINE
ISO-Alpha-Acids & Alpha Acids in Wort & Beer (HPLC) Analysis of hop acids and oxidised hop acids via HPLC	500 mL	5 - 7 days	LAB-ALPHA	BEER
Sugar Analysis (HPLC) High-Performance Liquid Chromatography (HPLC)	300 mL	5 - 7 days	LAB-SUGAR	BEER
Beta Glucan Analysis Measure of beta glucan levels in beer and wort	100 mL	3 - 5 days	LAB-BETA-G	BEER

Please complete a copy of our laboratory sample form with your contact details and analysis requirements and send with your sample to: The Laboratory, Murphy & Son, Alpine Street, Nottingham, NG6 0HQ. We will in touch to confirm receipt of your sample and email you a copy of the results. **PLEASE NOTE** any unidentified samples received by the lab will be disposed of within 24 hrs.

LAB CONSUMABLES

NAME OF TEST & DESCRIPTION	CODE
KITS	
Alkalinity Test Kit x1 Sample bottle & x1 bottle of tablets - Enough for approximately 50 tests (water dependent)	LABSAL-ALKTEST
Copper Finings Kit Copper Finings Kit containing 7 cylinders, a jug, a beaker, pipette, and pipette bulb, for doing copper finings optimisation.	LABSAL-COPKIT
Microscope Kit A Brunel SP30 Microscope + counting chamber, pipettes, methylene blue + case	LABSAL-MICROKIT
SUPPLIES	
Microscope A Brunel SP30 Microscope & Case	LABSAL-MICROSCOPE
Myron Handheld pH Meter with ATC A pen type pH meter with built in temperature compensation	LABSAL-PH-METER
Haemocytometer - Improved Neubauer A double cell Rhodium coated counting chamber for cell counts	LABSAL-HAEM
GlutenToxPro (5 per Case) Used as surface test for efficacy of cleaning only. Please note: in the UK for beers to be labelled as gluten free, they must be below 20ppm of gluten as determined by R5 ELISA Competitive testing carried out in a UKAS Accredited laboratory.	LABSAL-GLUTENTOX-PRO
Microscope Slide A pack of 50 glass microscope slides	LABSAL-SLIDES
Microscope Slide Coverslips A pack of 200 glass microscope slide coverslips	LABSAL-SLIPS
Haemocytometer Cover Slips x10 glass coverslips for either of the Haemocytometers we sell	LABSAL-HSLIPS
0.1N Iodine A 250 mL bottle of 0.1N iodine for starch tests	LABSAL-IODINE-250ML
Pipette Filler A rubber bulb pipette filler	LABSAL-PIPBULB
Sterile Pipettes 1 mL x1 Serological 1 mL pipette, individually wrapped	LABSAL-PIPI
Sterile Pipettes 10 mL x1 Sterile 10 mL pipette	LABSAL-PIPI10
Whatman Number 113 Filter Paper Whatman 113 240 mm filter papers - pore size 30 µm general purpose filter paper - Degassing etc (pack of 100)	LABSAL-FILTERPAPER
Peracetic Acid Test Strips 0 - 160ppm (Pack of 50) A pack of test strips for testing residual amounts of PAA post CIP rinsing	LABSAL_TS_PAA_50
Thermometer, Red Spirit -10°C to +110°C Spirit filled thermometers covering the range of -10°C to +110°C Filling is coloured red on a white back glass	AATHERMRS

LAB CONSUMABLES

NAME OF TEST & DESCRIPTION	CODE
Universal Sterile Sampling Bottle A 30ml sterile universal sampling bottle	LABSAL-UNITUBE
Methylene Blue Solution A 250 mL bottle of Methylene Blue Solution for staining yeast cells to enable cell counts	LABSAL-METH-250ml
pH Probe Storage Solution A 500ml bottle of storage solution that cleans and protects pH probes	LABSAL-PH-S.SOL-500
pH Buffer Solution - pH 4 - 1000 mL 1000 mL bottle of pH 4 Buffer Solution	LABSAL-PH4-1000ML
pH Buffer Solution - pH 7 - 1000 mL 1000 mL bottle of pH 7 Buffer Solution	LABSAL-PH7-1000ML
pH Papers A pack of 100 strips of pH paper that can measure from pH 1 to 14	LABSAL-PH-PAPER1-14
Glass Saccharometer 1000 - 1030 Saccharometer	AA-SACCH-00/30
Glass Saccharometer 1000 - 1050 Hydrometer	AA-SACCH-00/50
Glass Saccharometer 1000 - 1060 Hydrometer	AA-SACCH-00/60
Glass Saccharometer 1010 - 1020 Hydrometer	AA-SACCH-10/20
Glass Saccharometer 1090 - 1120 Hydrometer	AA-SACCH-1090/1120
Glass Saccharometer 1120 - 1140 Hydrometer	AA-SACCH-1120/1140
Glass Saccharometer 1020 - 1030 Saccharometer	AA-SACCH-20/30
Glass Saccharometer 1030 - 1040 Hydrometer	AA-SACCH-30/40
Glass Saccharometer 1030 - 1060 Hydrometer	AA-SACCH-30/60
Glass Saccharometer 1040 - 1050 Hydrometer	AA-SACCH-40/50
Glass Saccharometer 1050 - 1060 Hydrometer	AA-SACCH-50/60
Glass Saccharometer 1060 - 1070 Hydrometer	AA-SACCH-60/70
Glass Saccharometer 1060 - 1090 Hydrometer	AA-SACCH-60/90
Saccharometer Jar Plastic 360 x 50 mm	AA-SACCH-JARP

NCYC



Premium, bespoke yeast services for brewers with their own wet yeast strain with made to order ready to pitch yeast. Your yeast will be stored, frozen (-80oC) under lock and key at the National Collection of Yeast Cultures. Understand the genetics and maintain consistency of your own strain, experiment with one of their high quality strains from the archive or discover and isolate new strains from your environment, the possibilities are endless.

NAME OF TEST & DESCRIPTION	CODE
Initial Accessioning Set Up	LAB-YEAST-SAFE-ACC
Safe Deposit Storage Standard	LAB-YEAST-SAFE-STD
Safe Deposit Storage premium	LAB-YEAST-SAFE-PREM
Furnishing of a Safe Deposit Sample	LAB-YEAST-SAFE-SAM
Isolation of Native Yeasts from Vineyard	LAB-YEAST-WINE-ISOLATION
Single Strain Yeast Suspensions to pitch 1 Brewers Barrel	LAB-YEAST-1BRL
Single Strain Yeast Suspensions to pitch 3 Brewers Barrel	LAB-YEAST-3BRL
Single Strain Yeast Suspensions to pitch 5 Brewers Barrel	LAB-YEAST-5BRL
Single Strain Yeast Suspensions to pitch 6 Brewers Barrel	LAB-YEAST-6BRL
Single Strain Yeast Suspensions to pitch 10 Brewers Barrel	LAB-YEAST-10BRL
Single Strain Yeast Suspensions to pitch 20 Brewers Barrel	LAB-YEAST-20BRL
Single Strain Yeast Suspensions to pitch 30 Brewers Barrel	LAB-YEAST-30BRL
Single Strain Yeast Suspensions to pitch 40 Brewers Barrel	LAB-YEAST-40BRL
Single Strain Yeast Suspensions to pitch 50 Brewers Barrel	LAB-YEAST-50BRL
Yeast Authentication: DNA Fingerprinting Per Sample	LAB-YEAST-AUTH
Yeast Culture Supply: Freeze-Dried Ampoule	LAB-YEAST-CULT-FREE
Yeast Culture Supply: Live Culture (Slope)	LAB-YEAST-CULT-LIVE
Chemotaxonomic Analysis Per Strain	LAB-YEAST-ID-CHEM
Yeast Identification DNA Sequence Analysis Per Strain*	LAB-YEAST-ID-DNA
Isolation and Purification (Selective/Enrichment Media)	LAB-YEAST-ID-ISO
Yeast Identification Services PCR Detection Method	LAB-YEAST-ID-PCR

MURPHY & SON LAB SERVICES

Shop all lab services online.

If you have any questions or require any support, get in touch with a member of our team, email laboratory@murphyandson.co.uk or call **0115 978 5494**.



MURPHY HUB

TECHNICAL

Driven by **Technology**

Powered by knowledge.



WATER ANALYSIS

From good to excellent beverages. Understand your water with comprehensive quality analysis, enabling you to fine-tune your water treatment processes.



CUSTOMISED SOLUTIONS

We recognise that each customer is unique. Our team works closely with you to tailor our analysis services, addressing your specific challenges and goals.



TECHNICAL SUPPORT

Experience our unparalleled 1:1 technical support with our seasoned beer, cider, wine, and spirit specialists. From beverage optimisation to personalised guidance, we tailor to you.



OUR SECRETS. YOUR BEVERAGE.

DISCOVER THE MURPHYS SECRET

MURPHY & SON LTD

www.murphyandson.co.uk

0115 978 5494

laboratory@murphyandson.co.uk

ACCREDITED BY:



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