



Quality, consistency, efficiency – helping microbreweries streamline their process

In 1887 Murphy and Son Limited, originally located in Leeds, was established by Albert John Murphy as a supplier of brewing components. In 1919, the company relocated to Nottingham at the Hutchinson's, Prince of Wales Brewery site, a historic landmark which subsequently became a listed building. While developing his products, Murphy realized the importance of

formulating water treatment techniques that could be used to complement the specific characteristics of a beer.

Today the company continues to make brewing supplies and also serves as a quality and consistency consultant to microbreweries in the United Kingdom.

“In the past five years pubs have been closing at a rate of 25 per week while the overall volume of beer consumed in the UK has dropped 2%. However, an elevated interest in the production of craft beer has resulted in a two-fold increase in beer produced by microbreweries and a greater desire among consumers for a better quality product. More beer is being consumed at home and as a result, there has been an increased need for quality and consistency in bottled beers to satisfy the expectations of the supermarket.”

—Charles Nicholds
Sales Development Manager
Murphy and Son Limited



Charles Nicholds,
Sales Development Manager



Paul Taylor,
Laboratory Manager

The Food Safety Act of 1990 mandated that facilities producing alcoholic beverages exercise due diligence, while later legislation focused on hygiene, required labs to establish and monitor their quality at (HACCP) Critical Control Points. One of the due diligence regulations requires sulfur dioxide (SO₂) levels to be limited to 50 ppm for cask conditioned beer and 20 ppm for keg beer. SO₂ levels above 10 ppm must also be noted on the label under regulations for labeling known allergens.

Murphy and Son offer UKAS accredited laboratories new testing equipment that provides their customers with cost effective ways to demonstrate due diligence. To provide these advanced services to the beer producing community, Murphy and Son decided to automate their laboratory about two years ago with the acquisition of a Thermo Scientific™ Gallery™ Plus Beermaster discrete analyzer.

“It would take an entire day in the past to complete seven tests on eight samples using traditional wet chemistry methods. Now 50 tests are completed in one hour.”

—Paul Taylor
Laboratory Manager
Murphy and Son Limited

This instrument enables them to perform a wide range of tests with accuracy and efficiency and provide fast turnaround time for results. The following tests are offered to their brewing clients:

- Sulfur dioxide: 10 ppm allergen labelling requirement in small pack
- Bitterness: for beer labelling and information
- Liquor analysis: alkalinity, calcium, magnesium, sulfate, chloride, nitrate, and pH
- FAN: Free Amino Nitrogen in wort

- Beta-glucan: detects the quantity of high molecular weight beta-glucan and its affect on filterability
- Organic acids, such as malic and acetic acids: for juice and cider consistency

The lab tests an average of 20–30 samples per day and has the ability to examine liquids at various points as they are moved through the production process. In addition to beer samples, they test the water that is used in beer production as well as cider and juice concentrates. Their overarching goal is to enable local microbreweries to maintain an efficient process while creating a quality product.



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