



Muntons

PASSIONATE ABOUT MALT SINCE 1921

Brewer's Guide

GREAT BEERS BEGIN WITH MUNTONS MALT



Hello

At Muntons, our passion for malt embraces both traditional heritage and exciting innovation. Whether it is the research and development of new and existing beer recipes or troubleshooting and best practice, our team are on hand to provide guidance and support whenever it is needed.

Sustainability lies at the heart of everything we do, and what we plan to achieve in the future. We have always been driven to not only lead the industry with sustainable malting methods and reduce our carbon footprint, but to the manufacturing of 100% sustainable malt. This has been our ethos over the last 100 years, and we will continue to ensure that our industry is safeguarded for future generations.



Meet The Team



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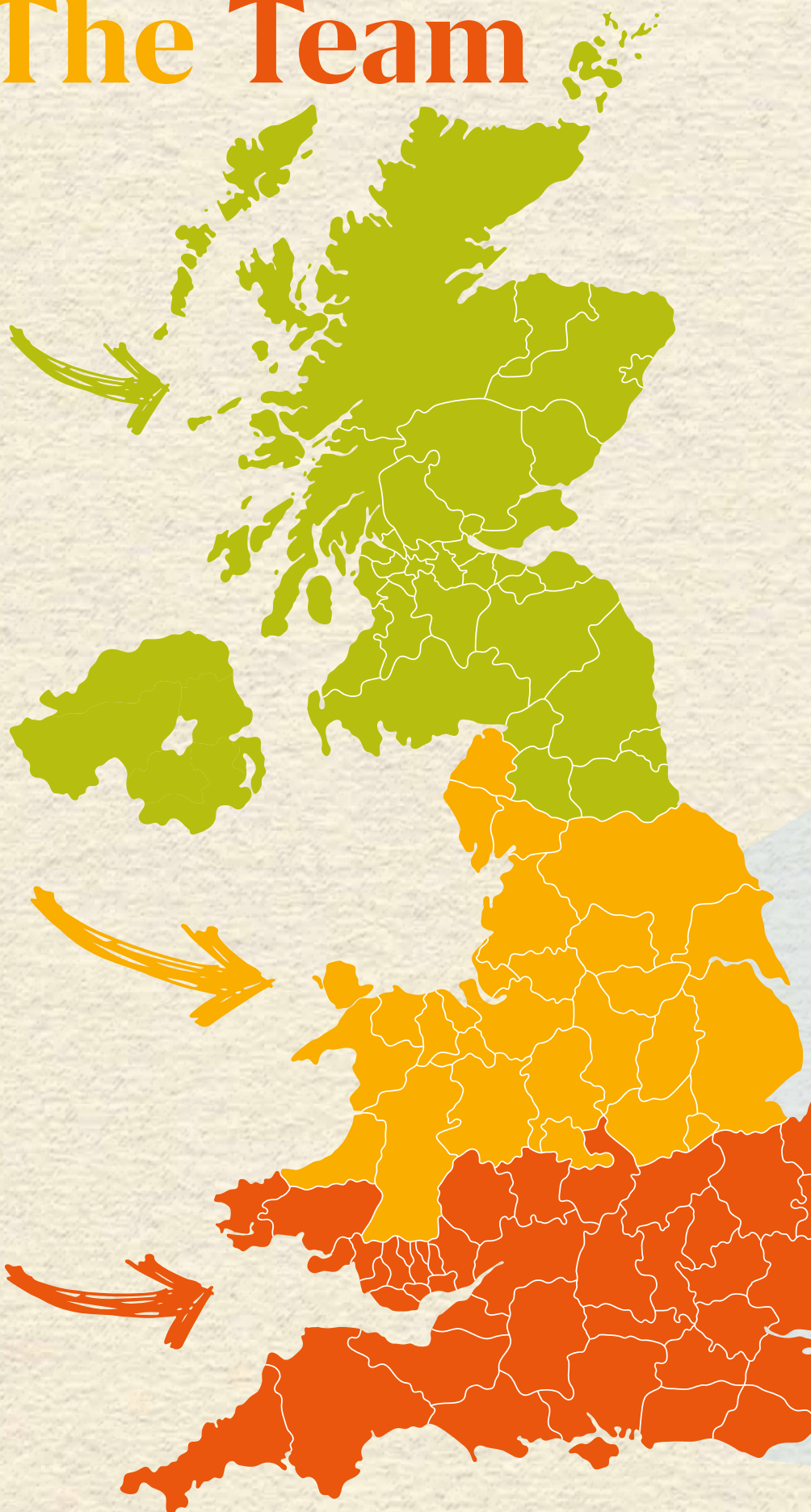
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Service Matters!

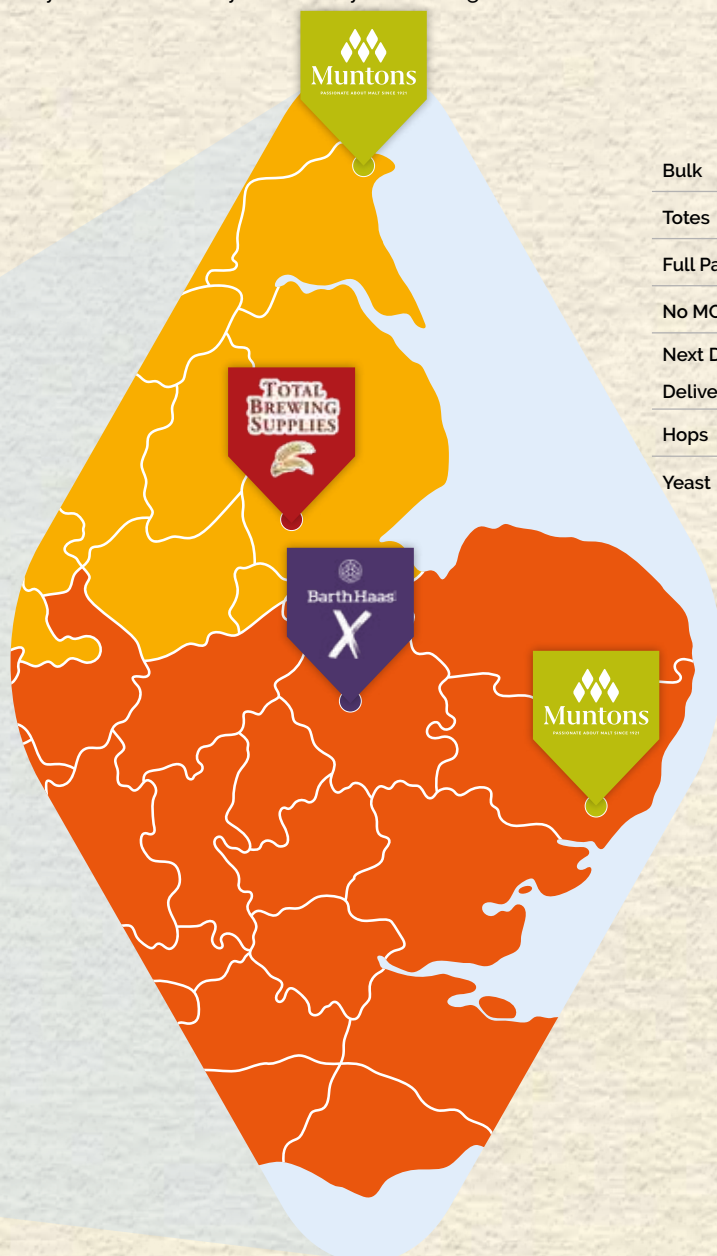
Our distribution hubs.

Muntons is passionate about malt and understands how important it is that brewers have reliability of supply to ensure they have the right brewing ingredients just when they need them.

A Solution to Fit All Needs

Muntons has partnered with two distribution hubs; Total Brewing Supplies and BarthHaas X offering regional and UK wide supply. As well as ordering directly with Muntons you can now order via our distribution hubs who will ensure you can get our range of malts and brewing extracts, quickly and easily, whatever your malt requirements. There is no minimum order quantity and they can offer a quick turn around on deliveries.

Why not see what they can do for your brewing?



	Muntons Malt	BarthHaas X	Total Brewing Supplies
Bulk	●		
Totes	●		
Full Pallet	●	●	●
No MOQ		●	●
Next Day Delivery		●	●
Hops		●	
Yeast		●	●

Muntons Malt

- Stowmarket & Great Blakenham
- Bridlington
- ➔ www.muntons.com
- ☎ +44 (0)1449 618300

Total Brewing Supplies

- Cromwell, Newark
- ➔ www.totalbrewingsupplies.co.uk
- ☎ +44 (0)1636 823909

BarthHaas X

- Huntingdon
- ➔ www.barthhaasx.com
- ☎ +44 (0)800 107 5073

1976

**Cedars Maltings
built at Stowmarket**

This new maltings picked its name from the cedar trees prevalent in the area, which also provided the name for the site address at that time, Cedars Factory.

1948

Moved to Stowmarket

Muntons took over the 45 acre site, constructed originally for the British Nylon Spinners company, who vacated shortly after the war.



1921

Muntons Incorporated

Originally named Munton and Baker (Bedford) Ltd, derived from the name of the company creator: Munton Baker-Munton.

1964

Expanded to Bridlington

Construction of new maltings completed in the midst of the fine Yorkshire malting barley growing region, to supply northern breweries and the Scottish whisky distilling trade.

2007

Singapore office opened

Providing us with a locally based sales presence to simplify communication with our Asian customers and dramatically increase local awareness of our company and its products.

100 Years & Counting

Celebrating our centenary year with strong heritage leading into the future with significant investment.

2020

Malt extract capacity increased

Evaporator three will mean that we are able to meet the growing demand for malt extract from our customers around the world.

Refurbishment of germination boxes

Updating and refurbishing the boxes will ensure many more years of service from the maltings at Stowmarket.

2015

Anaerobic Digester completed at Stowmarket

A project which underlines our commitment to sustainability, our AD plant not only reduces waste and greenhouse gas emissions but contributes towards our demand for electricity.



2009

US company formed

With significant trade in US homebrew and craft brewing, opening a US based company helped improve communication and access to this expansive market.

2019

Peating plant built near Bridlington

Located close enough to complete the malting process and introduce naturally phenolic peat flavours, the Tithe Top peating plant will help serve the growing needs of the scotch whisky industry.

Biomass Boiler at Bridlington

Producing the heat and energy needs of the site using biomass has reduced our corporate greenhouse gas emissions by 25%.

2021

Energy centre in Stowmarket

The centre will provide most of the steam, heat and electricity for our site and we are looking forward to the next 100 years as a strong, responsible and sustainable supplier of malt and malted ingredients.

ting

Why brew with Muntons?

We work closely with traditional and modern breweries to find new and exciting ways to enhance beer recipes, improve efficiencies and create new and innovative products. We provide a full portfolio of brewing malts from crushed malt in sacks to whole malt in bulk and have speciality 'drum maltings' at our Stowmarket site allowing for more flexibility in meeting your needs.

We offer a range of liquid and dried malt extracts which are the perfect solution to common challenges brewers face, from increasing ABV using extra pale ale malt extract, to colour addition with ultra-dark malt extract.

Quality

It is no coincidence that both Stowmarket and Bridlington maltings are in prime malting barley growing areas. Using the finest quality, locally grown raw material ensures that the products you buy from us are of the highest standard. The barley stored in each of our silos can be traced back to the farms and even the fields where it was grown. We have long-term partnerships with grain merchants and farmers, some of whom have grown barley for us every year for 30 years or more.

For more information on quality visit
<https://www.muntons.com/compliance/>



The world's most sustainable malt

Malt traditionally contributes between 35-39% of the CO₂ emissions of every pint of craft beer. At Muntons we have taken our commitment to producing the world's most sustainable malt into every strategic decision and progress step we make. It's a truly holistic approach. With our extensive experience and knowledge we can help breweries to map and reduce their carbon impact for raw materials as part of their own sustainability story.

Sustainability is a core part of our ethos and has been for over 20 years. We were the first Maltster to set a Science Based target (45% reduction of our scope 1 and 2 CO₂ emissions by 2025) and the first maltster to celebrate meeting and beating that target 3 years early. As the world's greenest maltster, we believe passionately in creating a positive impact on society and the planet. We are proud to produce the lowest carbon malt in the world*.

If you would like more information on our world-leading sustainability programme, our ESG Report is available to download www.muntons.com/practical-sustainability

**White Malt Scope 1&2 2022 publicly available data*



Expertise

Behind great malt, you'll find great people. At Muntons we have always understood the importance of our people in delivering the best possible products and service for our customers.

Our production team constantly seek to be the best they possibly can, with many achieving industry recognised qualifications such as general certificates, malting diplomas and the highly coveted Master Maltster!

This reflects the dedication and commitment our people have and allows us to offer expert technical support to you.

Innovation

We have regular cross-functional innovation sessions in which we review the landscape of the brewing and malting industry. Supported by in-depth market research, the outcome of these sessions is new and innovative product ideas and technologies that are then reviewed and tested by industry experts within Muntons.

In addition to new products we are always looking to improve our own processes to drive sustainability, whether it be a more efficient cooling system for our kilns or new methodology in the extract filters.

We openly share knowledge gained through our market and industry research with our partners/customers to assist in new product development and product reviews. Our goal is to continuously generate new and exciting innovations that will empower our partners to deliver enjoyment to people's lives by creating more of what they love.



Innovation Centre

We are here to help

Our technical brewing team are always on hand to assist with recipe development in our nano brewery, blending, preparation and fermentation facility.

The team have experience in turning concept recipes into retail quality samples which can then be assessed in our sensory room by our internal tasting panel. Once brewing analysis is completed the team will send you samples and a brew report for you to take to potential customers. As the world's largest malted ingredients supplier to the food and soft drink industry our expertise does not end with great beers. We are also able to help you develop recipes for hard seltzers, soft drinks, cordials, malted drinks, ready-to-drink products and even unique beer snacks. If it has malt in it, we can make it!

Fancy a brew day with us?

If you want to try something new without interrupting your existing brewing process or do a trial run before scaling up, we can help and the best way to experience what we can offer is in person. On our brew days you will not only see how your recipe progresses, but you will also receive a tour of the maltings, mill and extract factory. As an existing customer get in touch with our sales team to arrange a day. Not yet a Muntons customer? We are still happy to offer a Brew Day and assist in your development for a fee.

At Muntons we don't just supply malt, we offer full customer support, access to dedicated equipment and technical minds that are up for a challenge. We are happy to assist in all matters, whether it's grain handling, brewing efficiency or general brewing queries.





Something technical? Ask Rob



If I were a beer, I would be a Lambic – served small, spritzy and sharp...with a wild depth that hides behind an innocent appearance.

Robert Urquhart

New Product Development Brewing Technologist

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Rob joined Muntons as New Product Development Brewing Technologist in 2022. He studied Brewing & Distilling BSc (Hons) at Heriot-Watt University in Edinburgh, graduating with a 1st Class degree with Honours. Rob then specialised in the craft brewing industry, working as Production Brewer at Siren Craft Brew. As part of his role at Muntons, Rob has been involved with the development of new malts and malt extracts as well as recipes, trial brewing and sensory evaluation for customers of all sizes.

Malt Flavours

Characteristics by malt type

Caramel	Crystal up to colour 110 EBC, Caramalt	Cereal	Wheat, Ale
Coffee	Chocolate, Black	Sweet	Ale, Amber, Munich
Chocolate	Very dark Crystal	Burnt	Black, Roasted Barley or Malt
Treacle	Crystal over 240 EBC colour	Nutty	Caramalt, Ale
Smoky	Smoked/Peated	Green	Lager, High Enzyme, Diastatic
Phenolic	Peated	Sulphury	DMS, Lager, Sulphitic and Sulphidic
Fruity	Crystal colour up to 110 EBC, Munich	Solvent	Should not be present in any malt type
Bitter	Chocolate, Black	Toffee	Crystal up to colour 240 EBC

Flavour Wheel

Malt sensory analysis

Although malt tasting is not currently any part of the malt specification, it does offer possibilities to differentiate both positive and negative flavours. Conventional malt analysis may suggest that malts are identical however their flavours could well differ significantly.

We use a method to fully describe the profile of malt using a 'porridge' made by grinding whole malts with a small amount of water which helps in the tasting process.

The malt flavour wheel has allowed us to create distinct flavour profiles for the wide range of malts and malted ingredients we produce.



Our Products

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Available pack sizes



Bulk (lorry)



1 Tonne Tote Bag



25kg Sack



25kg Jerry Can (Extracts)

Super Pale Ale Malt

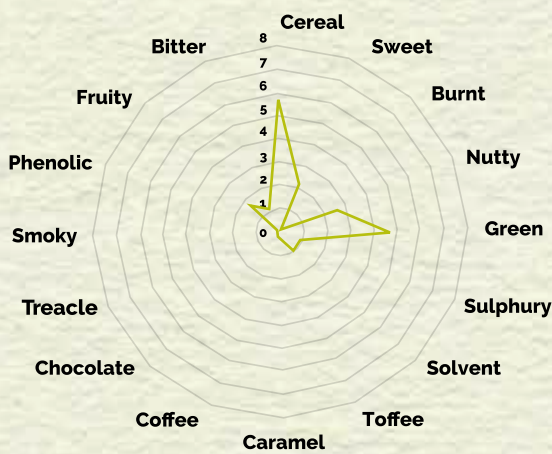
This exceptionally pale malt is ideal for brewers looking to create the palest ales possible while still retaining sufficient body to ensure a full mouthfeel. Super pale has been created with two main points in mind: As low a colour as possible and the ability to pair really well with hops. By using a specifically developed combination of germination and kilning profiles, this malt achieves a full flavour profile, very akin to an Extra Pale Ale Malt, whilst only developing two-thirds of its colour.

Applications:

The light colour and clean flavour profile of Super Pale Ale Malt lend themselves to multiple beer styles. Using this exceptional malt, brewers can create extremely low colour beer with reddish and copper hues, a characteristic which also lends itself to the creation of vibrantly coloured fruit-beers. Here, the low colour of the malt allows the colour of the selected fruit of choice to really shine through. Super Pale Ale Malt is our lightest pale malt, and is ideally suited for IPA, bitter, golden ales, and light beers.

Typical Analysis:

Parameter	Unit	Super Pale Ale
Moisture	%	≤ 6
Extract (dwt, 0.7mm grind)	L°/KG	≥ 305
Total Nitrogen (dwt)	%	≤ 1.7
Wort Colour (IOB 515ml)	EBC	≤ 2



Pilsner & Lager Malt

The craft beer movement having concentrated largely on traditional ales, porters and stouts is now showing interest in lager. Traditional bottom fermented lagers, matured or 'lagered' for weeks or months at low temperatures, develop a character and drinkability far removed from the chill filtered, highly carbonated beers traditionally sold as lager in the UK.

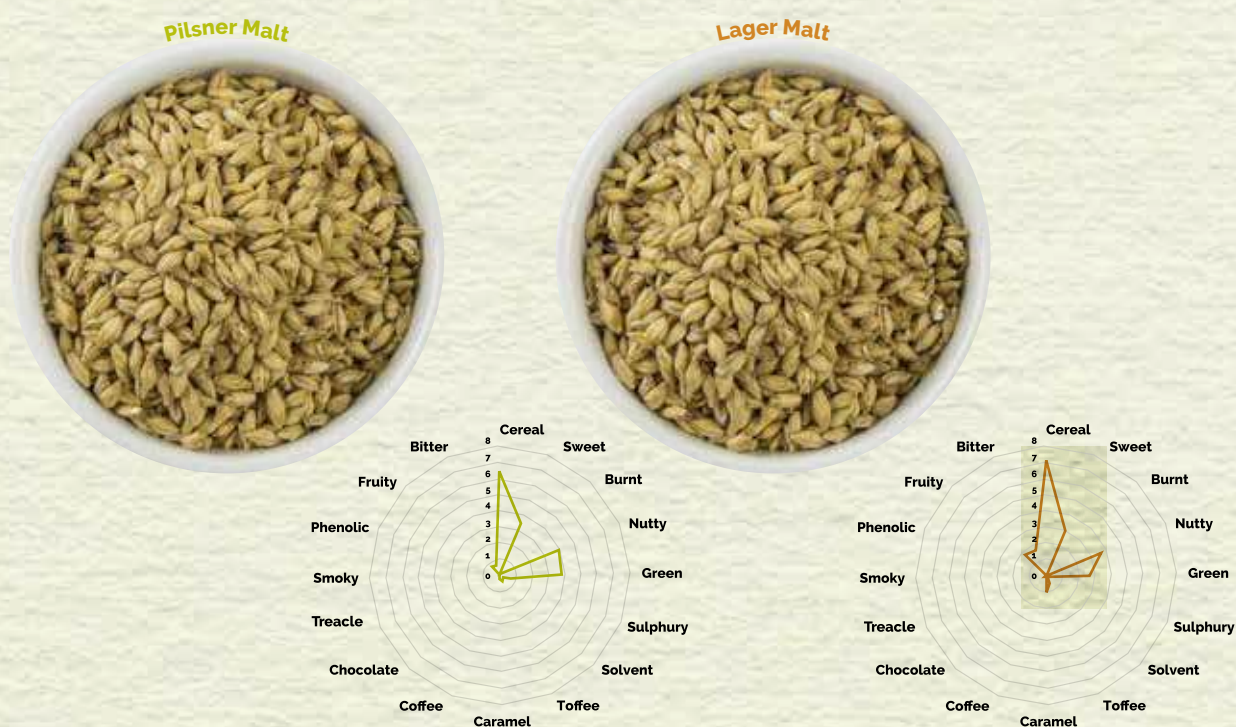
Muntons Pilsner Malt has been malted to provide the perfect base for a craft lager. This malt, which is related to our traditional Lager Malt, has its very own production profile, which ensures that the brewing process will be as smooth as possible. With our Pilsner Malt, we have slightly increased the modification and reduced the Beta Glucan level by 45%. Not only does this improve the brewing performance of our Pilsner Malt but it also adds flavours reminiscent of honey and freshly baked biscuits.

Applications:

A further benefit of our Pilsner Malt is its high level of enzyme activity - both DP and DU. This will increase the speed of starch conversion and increase the attenuation levels of the beer. When brewing, we recommend mashing at 62 - 63°C for a traditional lager. Please keep the gelatinisation temperature of your crop in mind. For more information ask your usual Muntons sales contact.

Typical Analysis:

Parameter	Unit	Pilsner	Lager
Moisture	%	≤ 5	≤ 5
Extract (dwt, 0.7mm grind)	L°/KG	≥ 308	≥ 308
Total Nitrogen (dwt)	%	≤ 1.8	≤ 1.85
Wort Colour (IOB 450g)	EBC	≤ 3.7	≤ 4



Pale Ale & Extra Pale Ale Malt

Introducing our Extra and Pale Ale Malts, a dynamic duo that forms the backbone of many brilliant brews. Crafted from high-quality barley, these malts are designed to offer a rich flavour profile and colour spectrum to complement a wide array of beer styles. Both malts exhibit excellent diastatic power for efficient conversion of starches into fermentable sugars, ensuring a smooth and efficient brewing process. Whether used alone or combined, these malts offer versatility, quality, and a depth of flavour that will elevate any brew.

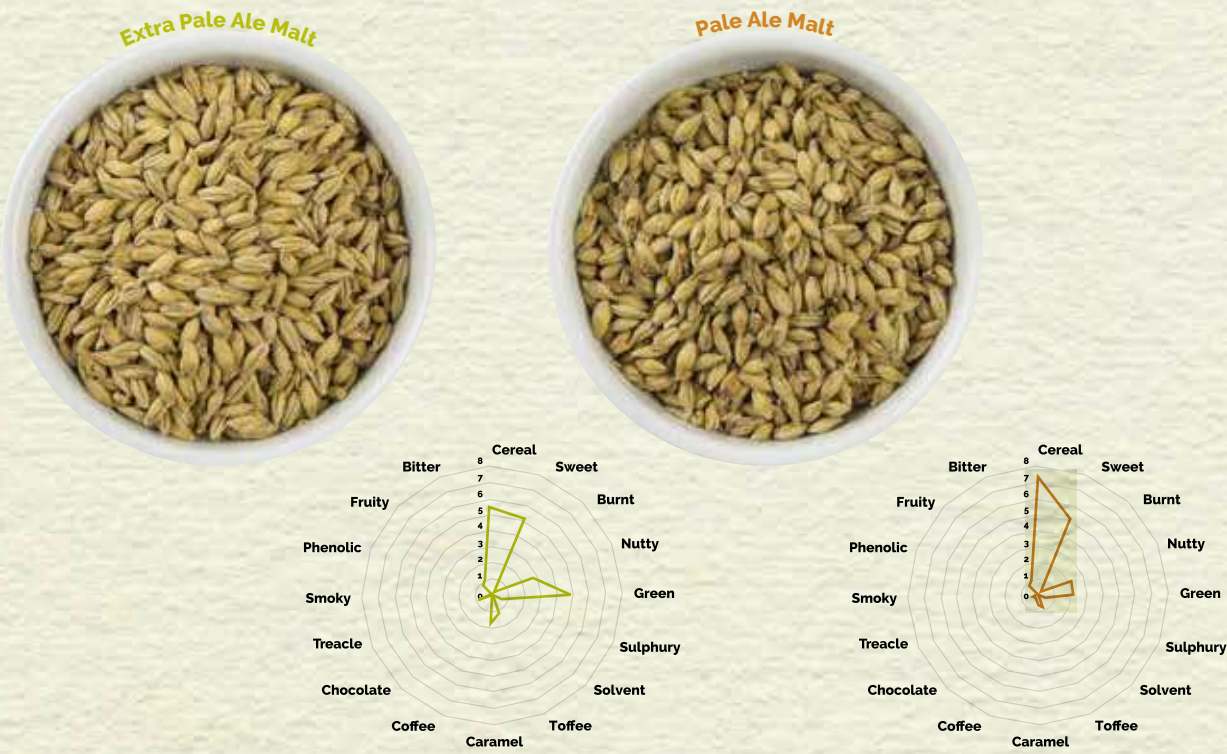
Applications:

Our Pale Ale Malt is renowned for its deep golden hue and complex flavour profile. Kilned to perfection, this malt brings forward notes of bread, biscuits, and a subtle hint of caramel. It adds body and mouthfeel to your brew, creating a robust malt character that sits beautifully in traditional ales, IPAs, stouts, and more.

On the other hand, our Extra Pale Ale Malt is the lighter, subtler sibling. Kilned to a lesser degree, this malt imparts a delicate straw colour to your brew, ideal for light beers, lagers, and pale ales. Despite its lightness, it delivers a smooth, slightly sweet flavour with hints of grain and bread, contributing to a well-rounded drinking experience.

Typical Analysis:

Parameter	Unit	Pale Ale	Extra Pale Ale
Moisture	%	≤ 4	≤ 5
Extract (dwt, 0.7mm grind)	L°/KG	≥ 310	≥ 310
Total Nitrogen (dwt)	%	≤ 1.65	≤ 1.65
Wort Colour (IOB 450g)	EBC	4 - 6	≤ 4



Maris Otter® - Pale Ale, Extra Pale Ale & Pale Blend 50:50 Malt

Malting barley varieties are typically grown for five to ten years, until they are superseded by newer, higher yielding and more robust varieties. Maris Otter® however is an exception to this rule. Although there have been many varieties with higher yields and extracts, none have managed to remove Maris Otter® from its position as one of the longest surviving and best known varieties. Its characteristic taste and outstanding processability, coupled with its historic significance make this a variety likely to remain a craft brewing favourite for many years to come.

Applications:

Brewers looking for extra malt flavour, should consider this traditional malt; this British staple – Maris Otter®. Introducing strong cereal, biscuit and nutty notes in beer, Maris Otter® remains one of the most popular malt varieties available for the serious craft brewer.

Typical Analysis:

Parameter	Unit	Pale Ale	Extra Pale Ale	Pale Blend 50:50
Moisture	%	≤ 4	≤ 5	≤ 4
Extract (dwt, 0.7mm grind)	L*/KG	≥ 308	≥ 310	≥ 308
Total Nitrogen (dwt)	%	≤ 1.65	≤ 1.65	≤ 1.65
Wort Colour (IOB 450g)	EBC	4 - 6	≤ 4	4 - 6

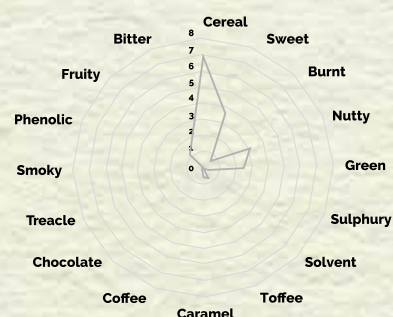
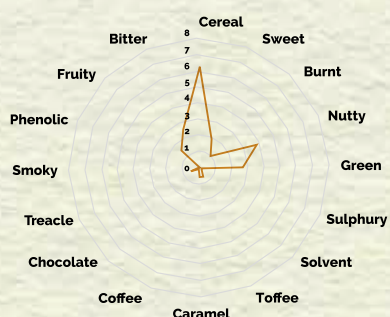
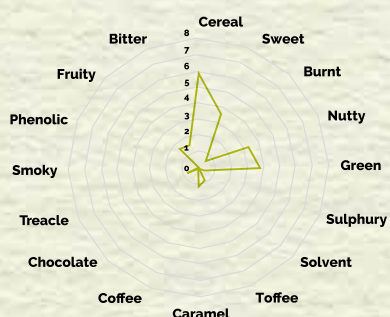
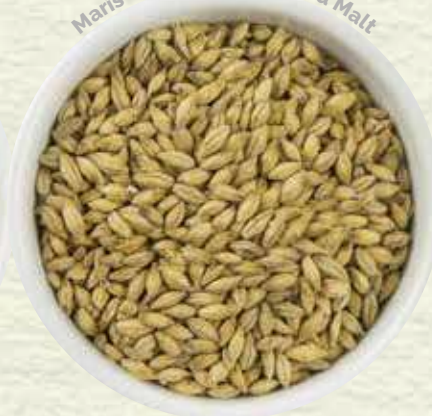
Maris Otter® - Extra Pale Ale Malt



Maris Otter® - Pale Ale Malt



Maris Otter® - Pale Blend Malt



Organic Ale Malt

Our organic malts are made from barley grown in a farming system without using man-made fertilisers, pesticides, growth regulators, irradiation or through genetic modification. All of our organic products are regulated under the Organic Food Federation. Organic malt will inevitably have a wider specification than non-organic malts, as only relatively small quantities of organic barleys are grown and available for maltsters to purchase.

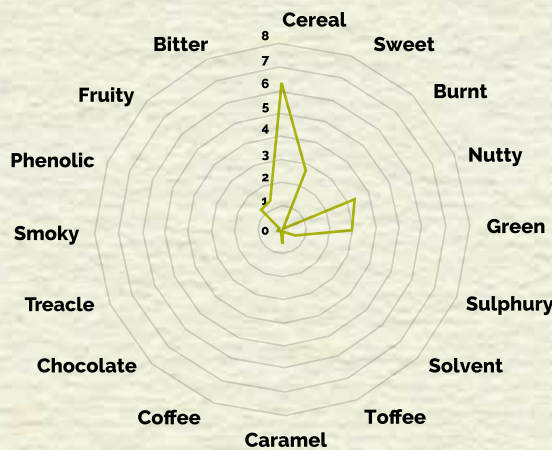
Beers made from Organic Ale malt will appeal to consumers seeking to uphold the values which organic farming methods follow and will therefore hold an appeal to this niche market.

We are a member of the Organic Food Federation and ensure that the organic malting barley and the products we make are fully compliant with their guidelines. Our organic malts provide an ideal base for the brewer looking to brew a quality organic beer. As organic malting barley is grown under completely natural conditions the specification may well vary more widely than barley grown using accepted traditional methods, where fertilisers and pesticides may well have been used.

We ensure that all our organic products are of the highest possible quality and are ideal for brewers looking to craft beers which will appeal to the growing community of organic consumers. As a base material, organic malts can be used to brew an extensive range of beer styles, from light delicate pilsners to robust stouts and porters.

Typical Analysis:

Parameter	Unit	Organic Ale
Moisture	%	≤ 4.5
Extract (dwt, 0.7mm grind)	L°/KG	≥ 290
Total Nitrogen (dwt)	%	≤ 1.7
Wort Colour (IOB 450g)	EBC	≤ 10



Mild Malt

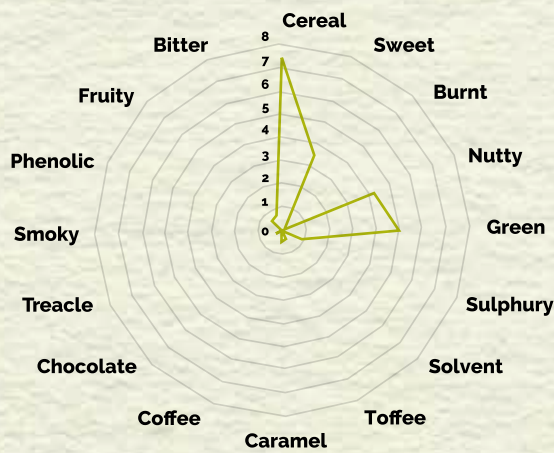
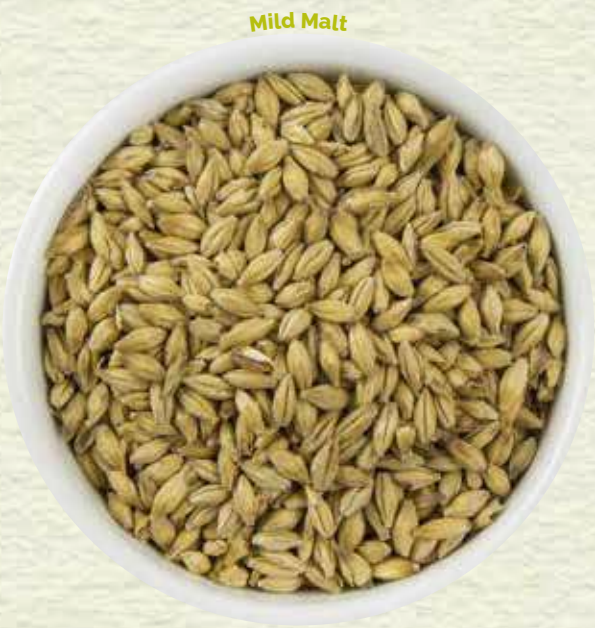
We have been making the finest malts for 100 years, and during that time beer styles have come and gone. One beer style we are particularly happy to see return is the traditional British Mild. The return to fashion of this classic beer style has meant that we could once again make a mild ale malt confident of interest from the market. Our Mild Malt is made from British winter barley, which makes it very consistent and reliable. The germination and kilning profiles are adjusted to create a malt which will bring increased sweetness and body in the beer, ideal for brewers aiming to reproduce this historically significant beer. It is the slightly decreased fermentability of our Mild Malt, which imparts this more malty and sweet flavour.

Applications:

Mild Malt is a great base material for no and low alcohol beer. Also, when used in conjunction with our Cara Malt 10 and our innovative new Muntons Sour Malt Extract, we were able to develop a perfectly balanced and very drinkable 0.5% ABV Ale. Muntons Mild Malt is ideal for mild ales, stouts and porters. It is slightly sweeter than pale malt and safe to use with high ratios of adjuncts.

Typical Analysis:

Parameter	Unit	Mild
Moisture	%	≤ 4
Extract (dwt, 0.7mm grind)	L°/KG	≥ 308
Total Nitrogen (dwt)	%	≤ 1.65
Wort Colour (IOB 450g)	EBC	5 - 7



Dextrin Malt

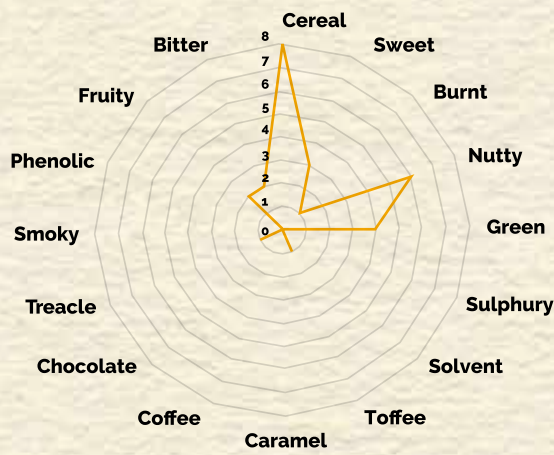
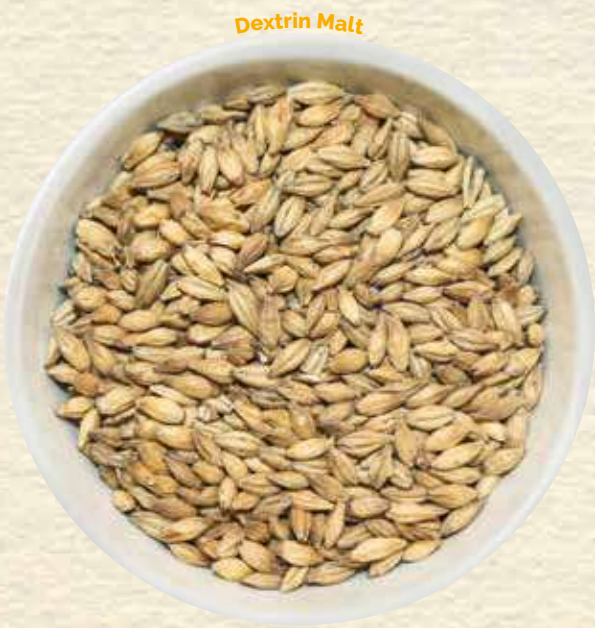
Dextrin malt is carefully made to ensure that a high percentage of unfermentable sugars are retained without the malt picking up excessive colour. This makes it ideal for light beer styles where the core flavour profile will not be lost. Dextrin malt is designed to provide body, improve mouthfeel and fullness to beers without adding caramel-like flavours often associated with darker crystal malts. The malt still has some enzyme activity and can be included in ratios of up to 30%. At high dosage rates of 20 -30%, this malt will slightly reduce the overall attenuation and add body and sweetness to the beer. In modern no and low alcohol beers, it has the potential to be used in very high dosages of 50 -75% as it will give the beer a solid highly flavourful base that is not as fermentable as a typical wort.

Applications:

Dextrin malt shows its strength in highly attenuated beers such as Lagers, Brut IPAs, Saisons and Wild fermentations. The high percentage of dextrins and complex sugars add a depth to these beer styles preventing beers becoming too thin or too dry. Try a modest inclusion of 2-3%, and see for yourself how it can enrich your beer.

Typical Analysis:

Parameter	Unit	Dextrin
Moisture	%	≤ 7
Extract (dwt, 0.7mm grind)	L°/KG	≥ 250
Total Nitrogen (dwt)	%	≤ 2
Wort Colour (IOB 450g)	EBC	≤ 7



Munich & Vienna Malt

Munich and Vienna malts originated in Germany, historically used in bocks and dark lagers, although they are now proving a popular addition in a wide variety of craft beers. These are highly kilned malts which have some residual enzymes.

Both Vienna and Munich malts provide rich malty flavours and aromas. They will raise the malt profile in beer without adding too much colour. Vienna can be a great base for golden ales or Vienna lagers.

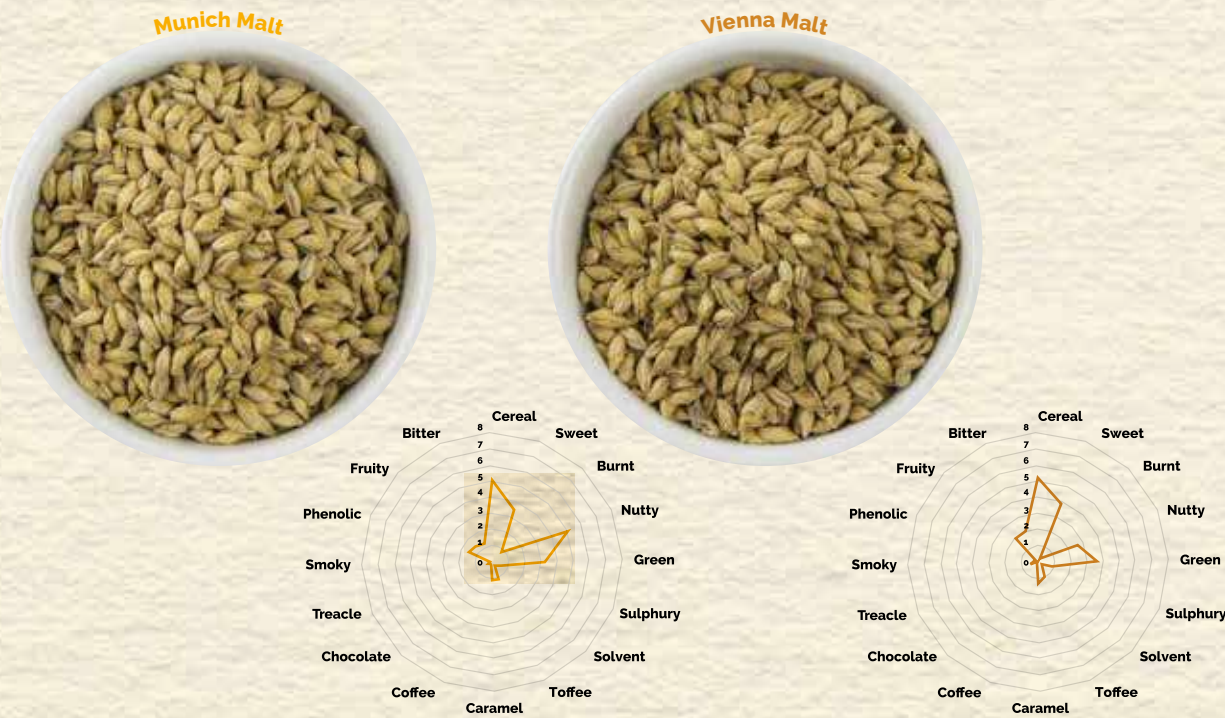
Applications:

Munich Malt: Suitable for any beer giving fuller body and rich toasted, biscuit and bready flavours.

Vienna Malt: Suitable for lagers and continental beers, in between Pale and Munich, golden and full bodied.

Typical Analysis:

Parameter	Unit	Munich	Vienna
Moisture	%	≤ 8	≤ 8
Extract (dwt, 0.7mm grind)	L°/KG	≥ 290	≥ 308
Total Nitrogen (dwt)	%	≤ 1.8	≤ 1.65
Wort Colour (IOB 515ml)	EBC	12 - 20	7 - 12



Cara Malts

Cara Malt 10 is Muntions lowest colour crystal malt. With its light colour and mild flavour, Cara Malt 10 can be added to even the lightest beer styles without affecting the core flavour profile. This malt is designed to bring body, improve mouthfeel and add character to beers, although the degree of effect will depend on the rate at which Cara Malt 10 is added. As the Malt is only partially crystallised, and still has some enzyme activity, it can be included in ratios of up to a maximum of 30% in traditional beer styles. At higher dosage inclusions, (20 - 30%) the overall attenuation will be reduced but it will introduce body and sweetness to the beer. In modern no and low alcohol beers, which are rapidly growing in popularity, it has the potential to be used in exceptionally high dosages of 50 - 75%. At these levels it gives the beer a solid highly flavourful base which is not as fermentable as a more typical standard wort.

Applications:

Highly attenuated beers such as Lagers, Brut IPAs, Saisons and Wild fermentations really benefit from the inclusion of some Cara Malt 10, as the high percentage of dextrins and complex sugars bring a depth to these beer styles reducing the chance that the beer might be too thin or too dry. Just a small inclusion of 2 - 3% is ideal.

Cara Malt 30 has a slightly darker and more intense flavour profile than Cara Malt 10. It is suitable for IPA, bitter, mild, stout, porters and golden ales. The colour is golden offering a toffee/caramel flavour.

Typical Analysis:

Parameter	Unit	Cara 10	Cara 30
Moisture	%	≤ 8	≤ 8
Extract (dwt, 0.7mm grind)	L*/KG	≥ 304	≥ 290
Wort Colour (IOB 515ml)	EBC	≤ 12	22 - 43



Crystal Malts

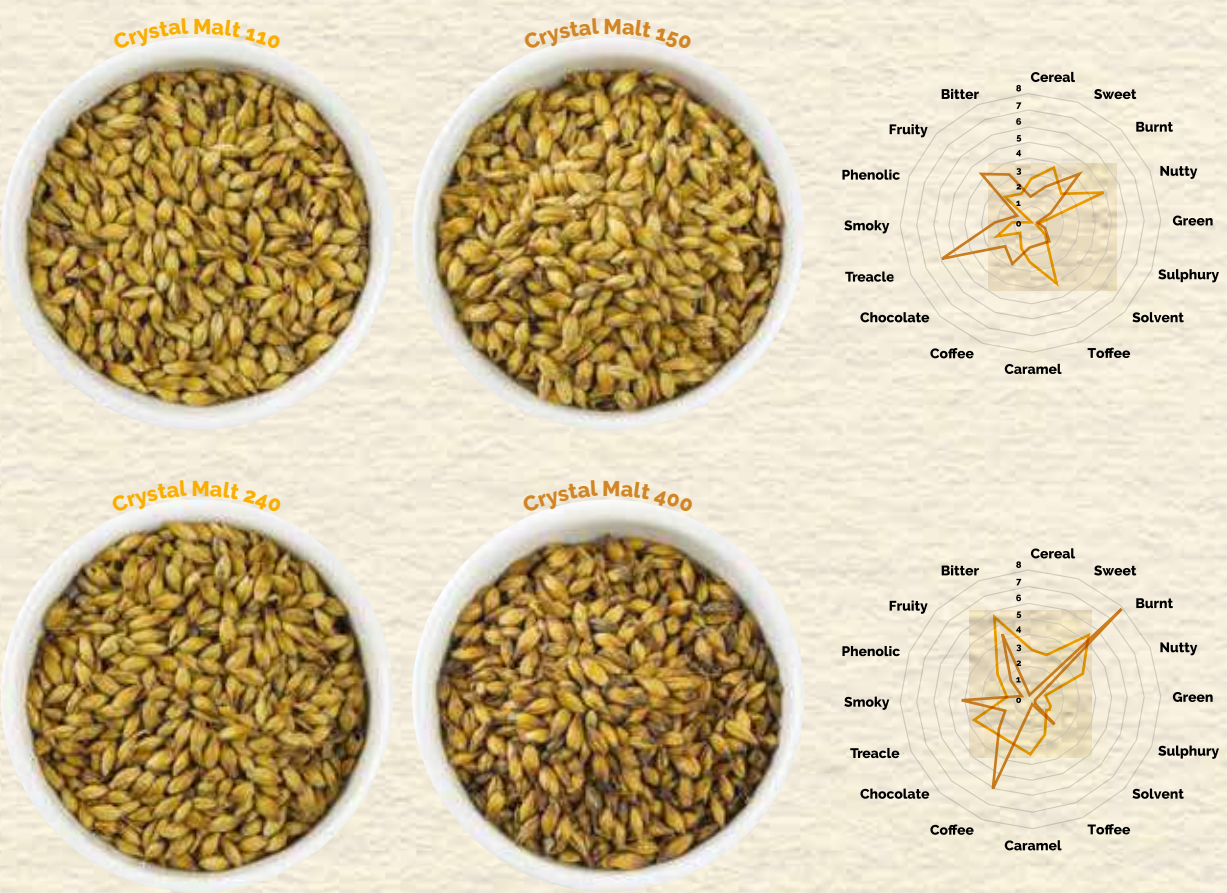
Muntons crystal malts are available in a range of colours and flavour intensities, offering the brewer a wonderful palate of ingredients to craft the beer they wish to create. Crystal Malts are made by transferring germinating 'green' malt to a roasting drum where a partial starch conversion takes place within the grain, creating sweet, 'crystallised' or 'caramelised' malt sugars. By selecting the correct crystal malt the brewer can introduce interesting colour hues as well as fruit, toffee, coffee, treacle and even chocolate notes to beers.

Applications:

Suitable beers include IPA, bitter, mild, stouts and porters. Copper/red/amber in colour with sweet toffee, biscuit, nutty, malty flavours that increase as colour increases. Starches are crystallised.

Typical Analysis:

Parameter	Unit	110	150	240	400
Moisture	%	≤ 7	≤ 7	≤ 7	≤ 7
Extract (dwt, 0.7mm grind)	L°/KG	≥ 285	≥ 280	≥ 275	≥ 270
Wort Colour (IOB 515ml)	EBC	110	150	240	400



Amber & Brown Malt

Amber and Brown malts have their roots firmly planted in the past. Originally used to impart colour and flavour in darker beers such as browns and porters, these malts fell out of fashion as brewers and consumers drifted towards lighter coloured and weaker beer styles. The growth in craft brewing and demand for interesting beers has enabled maltsters to bring back into production these classic lightly roasted malts. Muntons Brown Malt is a British specialty malt made by using traditional malting techniques and the highest quality of British barley.

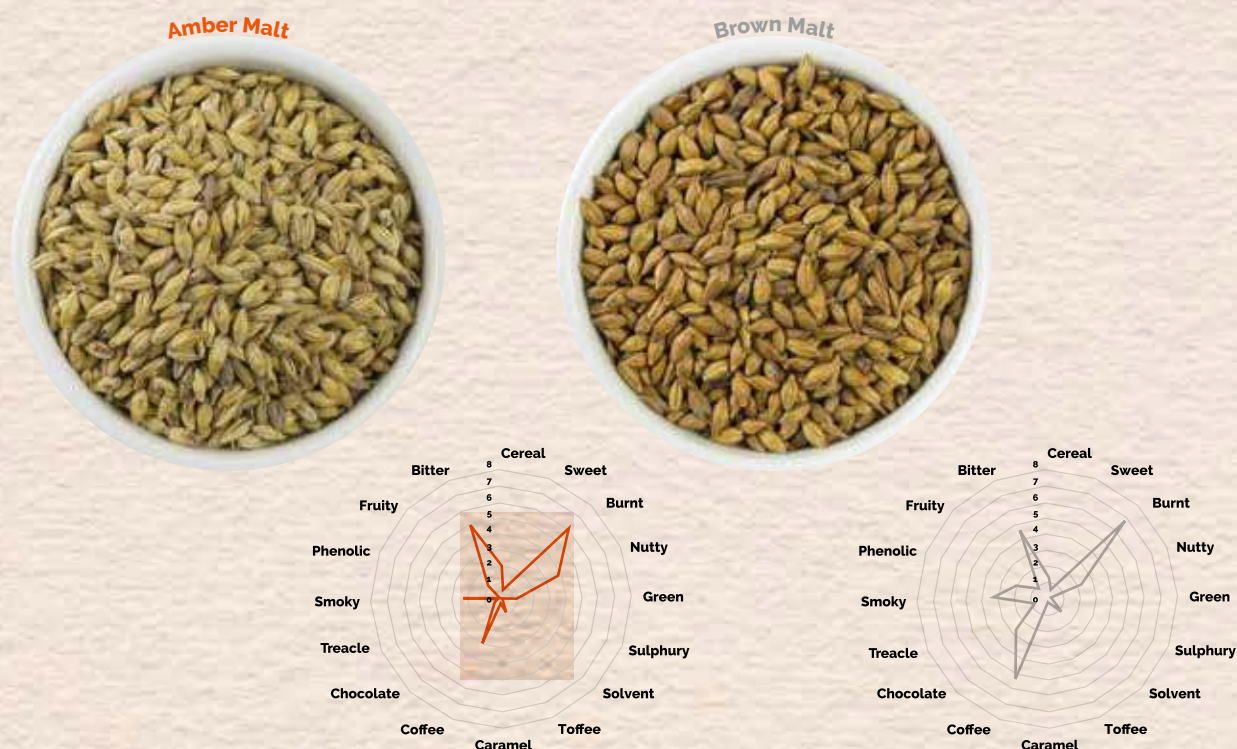
Applications:

Amber Malt: Suitable beer styles include Mild, Bitter, Ales, IPA, Brown Ale, Stout, Porter. Straw/golden in colour with nutty light toast flavours.

Brown Malt: Suitable beer styles include Mild, Bitter, Ales, IPA, Brown Ale, Stout, Porter. Brown/dark amber in colour offering coffee, roast, strong toast flavours.

Typical Analysis:

Parameter	Unit	Amber	Brown
Moisture	%	≤ 3	≤ 3
Extract (dwt, 0.7mm grind)	L°/KG	≥ 270	≥ 250
Wort Colour (IOB 515ml)	EBC	40 - 75	130 - 170



Light Chocolate & Chocolate Malt

Light Chocolate and chocolate malt are our go to roasted malts for colour and flavour additions. These malts add notes of coffee, burnt toast and dark chocolate. Inclusions of up to 5% are recommended in dark beer styles. These malts are the perfect choice for brown ales, stouts, porters and any other dark beer requiring a smooth dark flavour.

Applications:

Light Chocolate Malt: Suitable beer styles include Mild, Bitter, Ale, IPA, Brown Ale, Stout, Porter.

Chocolate Malt: Suitable beer styles include Mild, Bitter, Ale, IPA, Brown Ale, Stout, Porter. Dark brown/ruby colour, offering burnt coffee/cocoa bean and bitterness.

Typical Analysis:

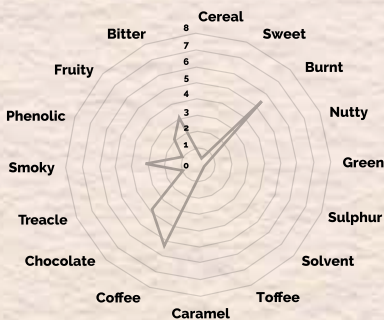
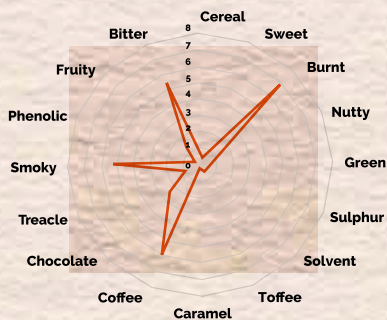
Parameter	Unit	Light Chocolate	Chocolate
Moisture	%	≤ 7	≤ 6
Extract (dwt, 0.7mm grind)	L°/KG	≥ 200	≥ 200
Wort Colour (IOB 515ml)	EBC	380-440	850-1200



Light Chocolate Malt



Chocolate Malt



Black Malt & Roasted Barley

Black Malt is our darkest roasted malt. It imparts a strong roasted character and can be used in very small amounts to add a darker colour to beers. Notes of burnt coffee and high cocoa chocolate can be achieved.

Roasted barley is made using un-malted barley, because of this it is able to impart a drier finish to dark beers as the starches in the grain have not been modified prior to the roasting process. This grain is perfect to use when making a dry stout or black or Baltic porter.

Applications:

Inclusions of these product can range from 1-6% to add high amounts of colour and flavour. When used in higher ratios, the low extract and fermentability need to be accounted for to ensure the beer finishes with the correct mouthfeel.

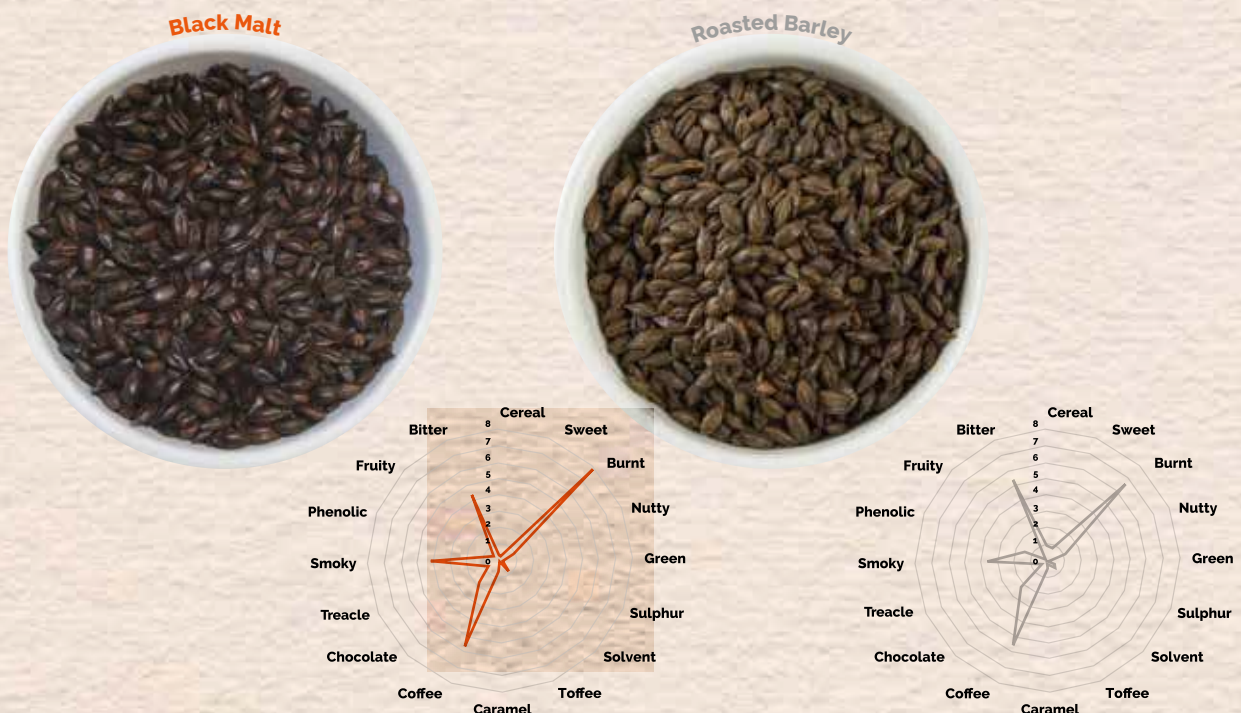
Black Malt: Suitable beer styles include Mild, Bitter, Ales, IPA, Brown Ale, Stout, Porter.

Roasted Barley: Suitable beer styles include Mild, Bitter, Ales, IPA, Brown Ale, Stout, Porter.

Dark brown/black colour with burnt toast, charcoal, dry, bitter flavours.

Typical Analysis:

Parameter	Unit	Black	Roasted Barley
Moisture	%	≤ 7	≤ 6
Extract (dwt, 0.7mm grind)	L*/KG	≥ 200	≥ 200
Wort Colour (IOB 515ml)	EBC	1400	1500



Wheat Malts

In addition to our barley malts, we supply a range of other malted cereals.

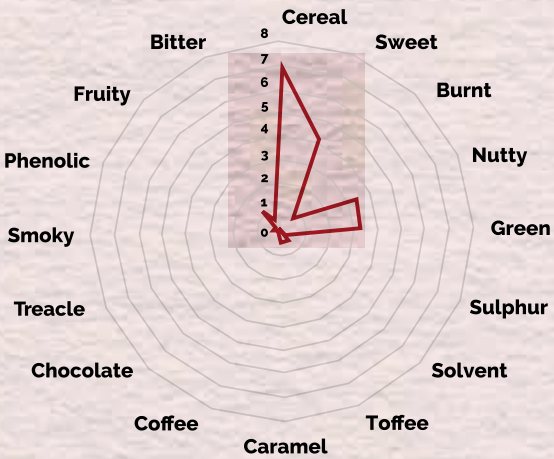
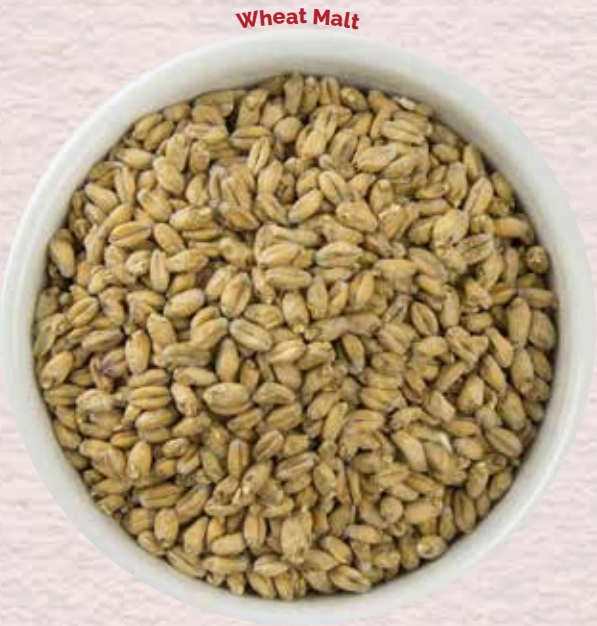
Wheat Malt is a great addition to any beer requiring a boost in mouthfeel or head retention. This malt is also superb in Belgian, American and German wheat beer applications. Inclusion can be up to 55% as long as the mash and sparge are adjusted to account for the husk, missing from wheat.

Applications:

Addition rates can range from 1-5% for a modest mouthfeel and flavour and up to 20% for intense toast and biscuit notes, paired with an intense dark flavour.

Typical Analysis:

Parameter	Unit	Wheat
Moisture	%	≤ 7
Extract (dwt, 0.7mm grind)	L°/KG	≥ 316
Wort Colour (IOB 515ml)	EBC	≤ 5



Oat Malt and Rye Malt

Oat and Rye are speciality malts made in our small batch drum maltings. These products are the perfect addition to beers demanding unique and interesting flavour profiles.

Rye Malt adds a nutty and fruity quality to beers and will significantly increase the mouthfeel when used at high rates. Due to its lack of husk, rye malt must be treated in the same way as wheat malt to ensure there are no run-off issues during brewing. This malt shines in IPAs, golden ales and rye variants of traditional beer styles.

Oat Malt will give the beer typical oat flavours reminiscent of breakfast porridge. The product has high levels of fatty acids which enable this malt to add a fine and stable haze to beers without having to reach for un-malted adjuncts. The protein structure of the oats add a creamy mouthfeel to beers. The strong husk on oat malt enables high inclusions without causing any processing issues.

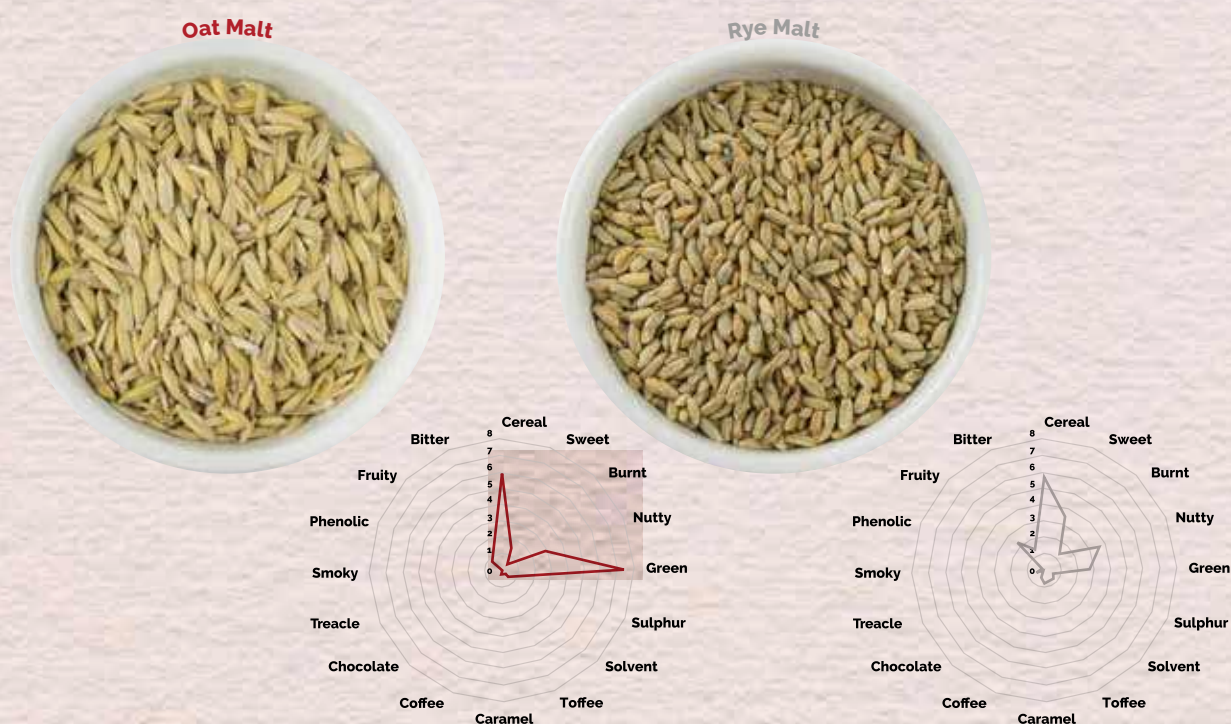
Oat Malt is best for breakfast stouts, NEIPAS and other hazy and smooth beer styles.

Applications:

The inclusion rates for both of these malts can be up to 50%, taking into consideration that the rest of the grist will need to include high enzyme barley malt to ensure conversion.

Typical Analysis:

Parameter	Unit	Oat	Rye
Moisture	%	≤ 5.5	≤ 6
Extract (dwt, 0.7mm grind)	L°/KG	≥ 230	≥ 305
Wort Colour (IOB 450g)	EBC	≤ 7	4 - 10



Torrefied Wheat

Adding torrefied wheat to a brew at 2-5% is a well known and reliable way of adding a complex protein matrix to your beer whilst maintaining stable head formation and retention. With the rise of the NEIPA, hazy and smooth beer is becoming more popular. We thought it would be really interesting to try out our torrefied wheat in a NEIPA and it worked really well. At an inclusion of 15- 20% we achieved a stable haze and a solid mouthfeel that pair perfectly with a citrusy hop addition.

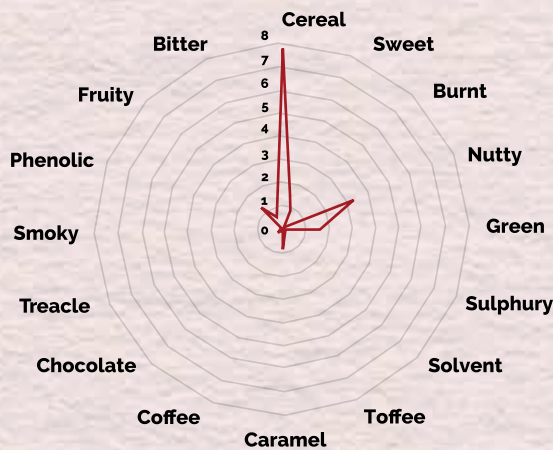
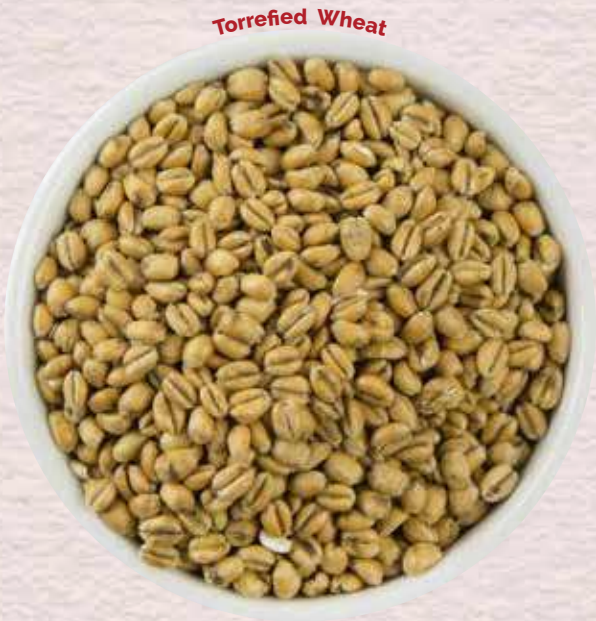
We also tried 50% torrefied wheat in a typical wheat beer recipe which produced a more cereal and grain forward taste making a refreshing summer wheat beer.

Applications:

Suitable for all beer styles. Ideal for mouthfeel and head retention. We recommend trying out a high inclusion of torrefied wheat 10-15% to add a smooth mouthfeel and give a stable haze to your beers.

Typical Analysis:

Parameter	Unit	Torrefied Wheat
Moisture	%	≤ 7
Extract (dwt, 0.7mm grind)	L°/KG	≥ 280
Wort Colour (IOB 515ml)	EBC	≤ 6



Dark Crystal Rye Malt

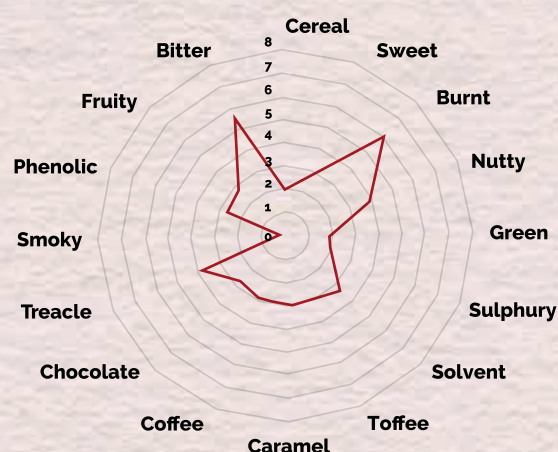
We offer a wide range of speciality malts ranging from low colour crystals to highly roasted black malts. One of the more unusual amongst our wide range of speciality malts is Dark Crystal Rye Malt which is a particular favourite of ours. It has a colour of 230 EBC so if you want a red colour to your beer this malt is the answer. The addition of 10 - 15% to a pale base will introduce a lovely red hue to your beer. This highly aromatic, caramelised rye is perfect for adding breadcrumb notes and bringing a touch of sweetness to any recipe. When incorporated in the grist at high inclusion rates, it delivers flavours reminiscent of hazelnut and toffee. When used in conjunction with extra low colour Ale Malts such as our Super Pale they balance perfectly, as they allow more of the intense copper colour to shine through.

Applications:

Suitable for use in beers such as bitters, mild ales, porters, red ales and golden ales. Small additions of Dark Crystal Rye may be used to impart a red hue in pale ales and lagers.

Typical Analysis:

Parameter	Unit	Dark Crystal Rye
Moisture	%	≤ 5
Extract (dwt, 0.7mm grind)	L°/KG	≥ 270
Wort Colour (IOB 515ml)	EBC	≤ 230



Flakes

Muntons Flakes are lightly toasted and pre-gelatinised. They can be used in a wide variety of brewing applications. The light toasting of our flakes brings an interesting complexity to the flavour and aroma of beers, whilst also adding depth, although they are predominantly used because of the benefits they bring to mouthfeel and body. Our malted flakes will impart an amber to copper colour hue if used in high amounts.

Applications:

Toasted Barley Flakes: Suitable for Stouts, Cream Ales and NEIPAs due to their balanced cereal-forward taste. We would recommend an inclusion rate of 2 - 7% for Stouts and Cream Ales and up to 15% for NEIPAs. This should be varied depending on the style of beer and the desired body – use a little less for lighter beer styles. It works particularly well in hop-forward beers because of its clean and balanced flavour profile.

Malted Rye Flakes: Great for adding a nutty and toasty flavour at inclusion rates of 5%.

Malted Wheat Flakes: Will help with the creation of a stable haze while adding a smooth mouthfeel. The inclusion rate can vary from 2 – 12 % depending on the desired depth of the mouthfeel.

Typical Analysis:

Parameter	Unit	Malted Rye	Malted Wheat	Toasted Barley
Moisture	%	≤ 8	≤ 9	≤ 13
Extract (dwt, 0.7mm grind)	L°/KG	≥ 220	≥ 220	≥ 250
Wort Colour (IOB 515ml)	EBC	≤ 40	≤ 50	≤ 2.6



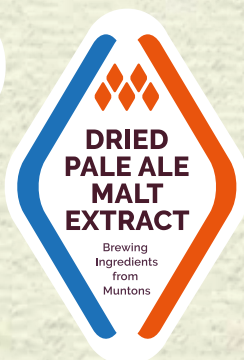


Brewing Extracts

We are not only a global supplier of malt, but also of malted ingredients including malt extracts.

Malt extracts are becoming increasingly popular in brewing and are used primarily as brew extenders and for colour addition. At Muntions, we have recognised the importance of these products, particularly in the craft brewing sector, and have released a core range of malt extracts to ensure our customers can achieve their maximum potential.

For more in-depth calculations or recipe builds, please contact our sales and technical teams.





**For a brew extender
or increased beer strength try...**

Pale Ale Malt Extract

Muntons Pale Ale Malt Extract is a highly concentrated wort made from low colour spring barley malt. The malt is mashed to ensure industry standard composition and fermentability. The resulting wort is then concentrated by means of vacuum evaporation, this process enables removal of water without increasing the colour or imparting caramelisation. This product, upon re-dilution will behave identically to traditional brewers wort. Our Pale Ale Malt Extract has many uses in the brewery, from extending brew lengths and enabling high gravity brewing to a feed for yeast propagation and a priming sugar with the right composition for your yeast.

Applications:

Muntons Pale Ale Malt Extract can be used as a direct replacement for malt with the added benefit of having a brewhouse efficiency of 100%. The best method for calculation of malt extract dosages is to calculate recipes as if you were to use Pale Ale Malt and then replace any malt that were not to fit into the mash tun with malt extract at a rate of:

$$1 \text{ KG Muntons (Variety) Pale Ale Malt} = \frac{\text{Brewhouse Efficiency}}{100} \text{ KG of Muntons Pale Ale Malt Extract.}$$

Typical inclusion calculations

0.31KG=+1 SG point in 1HL

0.51KG = +1 SG point in 1BB

For use in yeast propagation we recommend a dilution to 10degrees Brix/ 1.040 SG. This is achieved by diluting 1Kg of extract into 8.5L of water.

Typical Analysis:

Parameter	Unit	Pale Ale
Colour (10% w/v solution)	EBC	≤ 7
Refractometric Solids	%	79.5 - 82
FAN (10% w/v solution)	%	0.15 - 0.20
pH (10% w/v solution)		5 - 6
Typical extract (calculated from refractometric solids)	L*/KG	312



**For yeast propagation
or a brew extender try...**

Dried Pale Ale Malt Extract

Muntons Dried Pale Ale Malt Extract is a fine soluble powder made by drying our liquid Pale Ale Malt Extract. The malt extract is made from Muntons Pale Ale Malt which is mashed to ensure industry standard composition and fermentability. The resulting wort is then atomised and gently dried with hot air in a chamber called a Spray Dryer. This process enables removal of water without increasing the colour or imparting caramelisation. This product, upon dilution will behave identically to traditional brewers wort. Muntons Dried Pale Ale Malt Extract has many uses around a brewery from extending brew lengths, increasing ABV in final product, enabling high gravity brewing and perfect for yeast propagation.

Applications:

Muntons Dried Pale Ale Malt Extract can be used as a direct replacement for malt with the added benefit of no losses due to brewhouse efficiency. The best method for calculation of malt extract dosages is to calculate recipes as if you were to use Pale Ale Malt and then replace any malt that were not to fit into the mash tun with Dried malt extract at a rate of:

Typical inclusion calculations

0.26KG=+1 SG point in 1HL

0.43KG = +1 SG point in 1BB

For use in yeast propagation we recommend a dilution to 10degrees Brix/ 1.040 SG. This is achieved by diluting 1.1KG into 10L of water.

Typical Analysis:

Parameter	Unit	Dried Pale Ale
Colour (10% w/v solution)	EBC	≤ 7
Moisture Content	%	≤ 5.5
pH (10% w/v solution)		5 - 6
Typical extract (calculated from refractometric solids)	L*/KG	360



For added roasted flavours or colour adjustment try...

Roasted Malt Extract

Muntons Roasted Malt Extract is made from 100% Black Malt. For this product we use a specially designed mash profile to extract all of the colour, flavour and aroma from the grain. Due to the separation technology used the wort is particle free upon dilution. The wort is then concentrated using vacuum evaporation. This product is designed to enhance any beer that would benefit from more colour or roasted characteristics. Inclusion from as low as 0.1% will add colour and aroma. Up to 5% will make your beer as black as night with a strong roasted aroma and flavour.

Applications:

Roasted Malt Extract can be added during the boil, ferment or in bright tank. Applications vary from colour and flavour enhancement to final product colour adjustments.

The dosage is + 1 EBC = 1.10KG Roasted Malt Extract into 100HL

Typical Analysis:

Parameter	Unit	Roasted
Colour (10% w/v solution)	EBC	680 - 925
pH (10% w/v solution)		3.0 - 4.4
Refractometric Solids	%	45 - 54



For colour adjustment try...

Ultra-Dark Malt Extract

Muntons Ultra-Dark Malt Extract is made from 100% Black Malt using a specially designed mash profile to enhance the extraction of colour over aroma. The wort is processed in our ultrafiltration system to further increase the colour to solids ratio creating a unique product. This process ensures an extremely high colour while keeping the flavour and aroma contribution very low. Muntons ultra-dark malt extract is a perfect solution for brewers and distillers looking for a clean label colour to replace the use of caramel colouring or carbon additions.

Applications:

Due to the unique production process the recommended inclusion rates for this product are very low at less than 1%.

The dosage is + 1 EBC = 0.65KG Muntons Ultra Dark Malt Extract into 100HL

Typical Analysis:

Parameter	Unit	Ultra Dark
Colour (10% w/v solution)	EBC	1200 – 1400
pH (10% w/v solution)		3.0 – 4.4
Refractometric Solids	%	45 - 54



**For improved head formation,
retention and enhanced body try...**

Wheat Malt Extract

Muntons Wheat Malt Extract is made from 50% brewing quality wheat malt and 50% low colour spring barley malt. This product is mashed to extract the excess protein in the malted wheat resulting in a high quality malt extract with an increased protein load. It is then concentrated using vacuum evaporation to preserve the composition. It can be used as a base for wheat beers in breweries that struggle with slow runoff when using high amounts of wheat in the mash. At inclusion rates of 2-10% it can be used to increase the protein load of a wort, thus enhancing the body, mouthfeel, head formation and retention of the resulting beer.

Applications:

This product can be used as a direct replacement for wheat malt, torrefied wheat and wheat flakes at a rate of 1:1 replacement. When the product is used as a base material for a wheat beer, we recommend calculating the recipe based on a litre degrees per KG equivalent of 315.

Typical Analysis:

Parameter	Unit	Wheat Malt
Colour (10% w/v solution)	EBC	≤ 10
Refractometric Solids	%	79.5 - 82
pH (10% w/v solution)		5 - 6
Typical extract (calculated from refractometric solids)	L°/KG	312



Testimonials



Northern Monk

"We were introduced to Muntons dried malt extract a few years ago and have found it beneficial to our stout recipes in particular. It has proved a convenient way to boost the gravity and fermentables in wort when mash tun capacity reaches its limit and it reduces the need for multiple mashes or reduced brew lengths. It can allow for more complexity in a grist with less concerns over maintaining diastatic power and seems to add an extra depth to everything we use it in."

Brian Dickson
Founder/Technical Director
Northern Monk



Signature Brew

"We started working with Muntons five years ago and have enjoyed a supportive, collaborative relationship ever since. We saw an immediate increase in efficiency when we switched to their malt and have always appreciated their unwavering dedication to quality."

Tom Bott
Co-Founder
Signature Brew



Beartown Brewery

"The malts that Muntons supply are top quality and have been consistent throughout the years in which we have used them, helping us to create a variety of award-winning beers on a national and international scale."

The immeasurable part of Muntons value comes from their customer service. On many occasions we have mis-ordered or made mistakes which the fantastic Muntons team have rectified without issue. The technical support they offer, along with the nano brewery they have for development work is brilliant and has been a big help."

Spear headed by a dynamic sales team trio, it's always a pleasure to see these guys at any event and we would whole heartedly recommend Muntons to anyone."

Michael Manning
Head Brewer/Partner
Beartown Brewery

Joe Manning
Managing Director
Beartown Brewery



The Ferry Brewery

"When Muntons approached us about using their Premium Sour Malt Extract we were certainly interested and had no reservations. We liked the idea that it would enable us to brew a sour beer without impacting on the brewery or our brewing schedule, so we gave it a go and after a few trial brews the beer came out better than expected. We entered our Raspberry Sour into the Scottish Beer Awards which was a great opportunity for us to enter something different to our signature beers and it was shortlisted in the final. We recommend Premium Sour Malt Extract and will definitely brew with it again!"

Mark Moran
Head brewer/Owner
The Ferry Brewery

Recipes

Beer recipes to help you get started.

Imperial Stout

Recipe:

Original Gravity 1.110 / 26 Plato

Malt:

Maris Otter® Pale	62%	Crystal 150	4%
Munich	13%	Roasted Barley	4%
Wheat Malt	9%	Black Malt	4%
Chocolate Malt	4%	Crystal 400	4%

Hops:

Nugget	Boil 60 min / 44 IBU
Northern Brewer	Boil 30 min / 20 IBU
Fuggles	Boil 15 min / 8 IBU
Phoenix	Boil 5 min / 6 IBU

Yeast:

S-04 Ale yeast

Red Rye IPA

Recipe:

Original Gravity 1.052 / 13 Plato

Malt:

Extra Pale Malt	60%
Pale Rye Malt	10%
Munich Malt	20%
Melanoidin Wheat	10%

Hops:

Mosaic	Boil 30 min / 22 IBU
Mosaic	Boil 15 min / 5 IBU
Mosaic	Whirlpool / 6 IBU

Yeast:

S-04 Ale yeast

Kellerbier

Recipe:

Original Gravity 1.044 / 11 Plato

Malt:

Pilsner Malt	95%
Melanoidin Wheat Malt	2.5%
Cara Malt	2.5%

Hops:

Hallertau Mittelfrueh	Boil 60 min / 15 IBU
El Dorado	Boil 15 min / 10 IBU

Yeast:

w34/70



Muntons Sour

Recipe:

Original Gravity 1.036 /9 Plato

Malt:

Muntons Super Pale Malt 75%

Muntons Premium Sour Malt Extract 25%

Cara Malt 2.5%

Hops:

Cascade Boil 60 min / 10 IBU

Cascade Boil 30 min / 10 IBU

Amarillo End of Boil / 5 IBU

Yeast:

Belle Saison Yeast

Add 10% Passion Fruit, Raspberries or Lemon at end of ferment – don't forget to account for the extra sugars in the ABV calculation.

Handling of Sacks

25kg polypropylene

1

Photo is a reverse view image

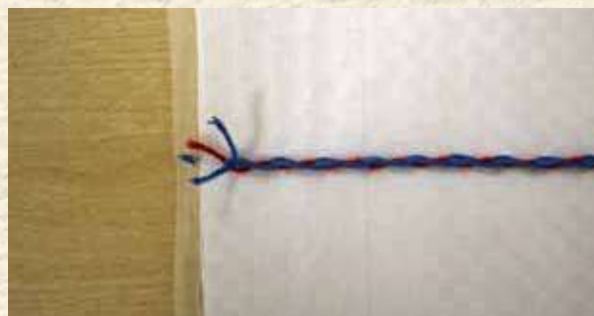
Stand behind the sack with the thickest stitch line facing away from you.



2

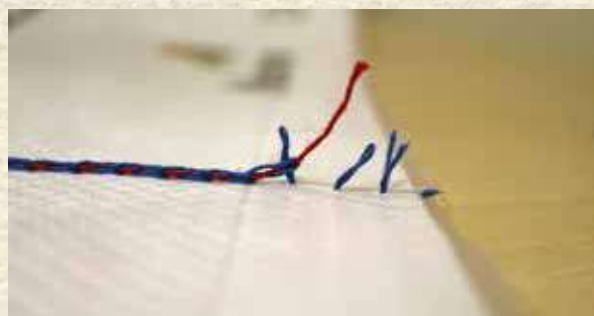
Photo is a reverse view image

Cut the thread with a sharp knife or scissors close to the edge of the bag on the right hand side.



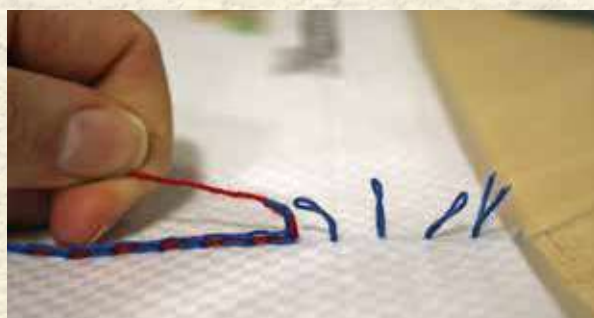
3

Once you have cut the stitching you should be left with something similar to the example to the right.



4

Pull the middle red thread to open the sack.





Recycle Your Malt Sacks

Sustainability is a key part of the way Muntions does business.

We reduce and recycle as much of our own waste as possible with less than 0.1% going to landfill. We are acutely aware that although our malt sacks are made of a fully recyclable material the infrastructure within the UK simply isn't there so we have partnered with QCR to help provide a solution that not only enables you to recycle your sacks it could streamline your waste management overall saving time and money.

QCR Recycling Equipment is proud to partner with Muntions to provide a better waste management solution to craft brewers. A leading distributor of innovative waste and recycling equipment from premier manufacturers; QCR offers rental and purchase options on balers and compactors for a wide range of materials including PP sacks. With a QCR solution you could reduce your waste volume by up to 90%, cutting the amount of bins you require whilst lowering your waste and disposal costs. QCR look forward to sharing their industry knowledge and working with brewers who want a sustainable solution to their business waste.

For more information contact
Mike Shutt, QCR Recycling Equipment Area Sales Manager.
e. mikeshutt@qcr.co.uk m. 07787 530655

Exclusive discount
on rental agreements when
quoting 'Muntions'.
Contact Adam, David or Joe
for more information.



Muntons

PASSIONATE ABOUT MALT SINCE 1921



Muntons

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