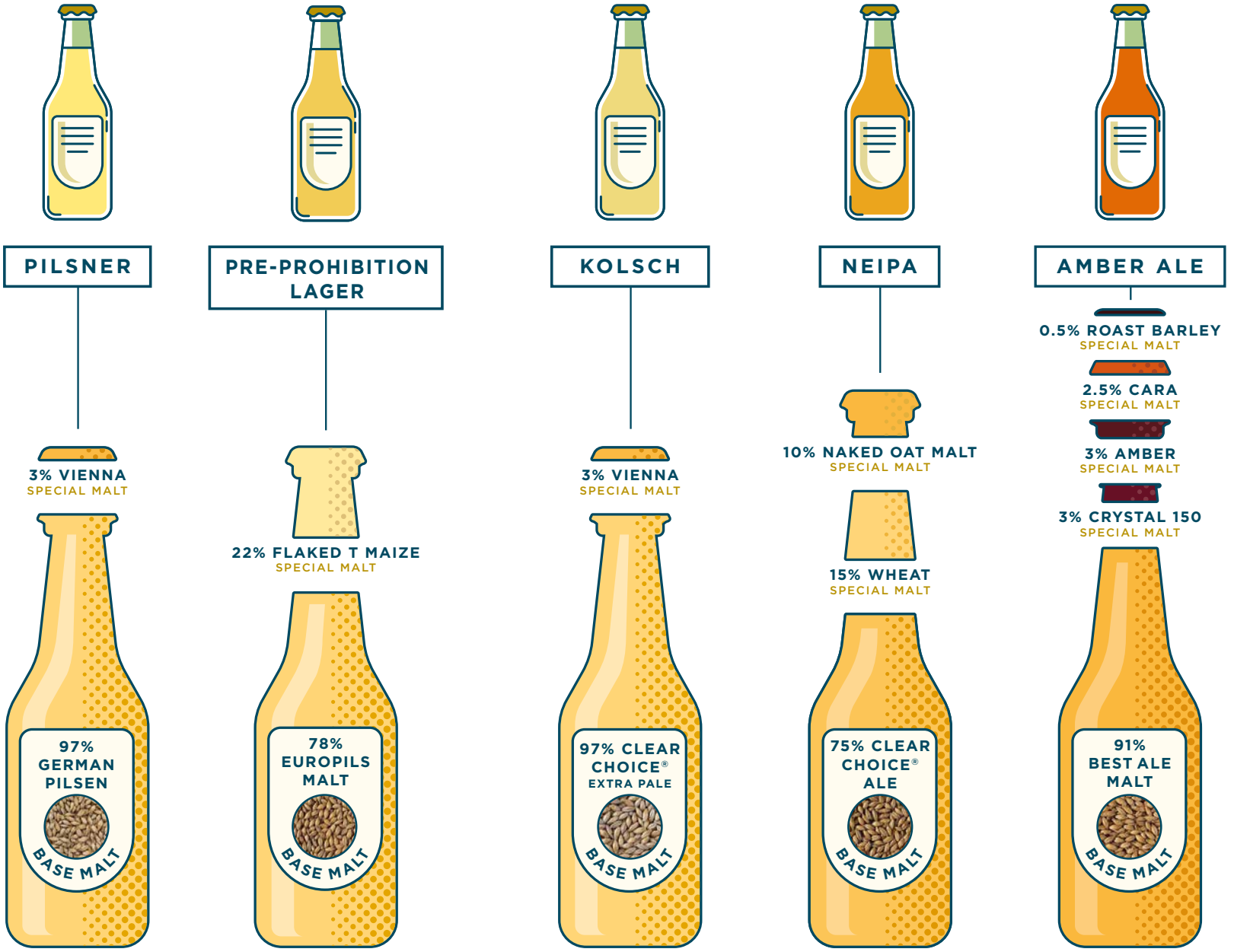
THE MALT HANDBOOK

SINCE 1870

CRISP

THE FINEST MALT

BEER BUILDING BLOCKS



Recipe page 97

Recipe page 98

Recipe page 101

Recipe page 107

Recipe page 109

THE MALT HANDBOOK

THE
MALT
HANDBOOK

CONTENTS

05 CRISP
05 Introduction To Crisp
06 Crisp History
07 The Crisp Team
08 Technical Support
09 The Growing Year
10 Maris Otter®: A Norfolk Heirloom
12 Making The Finest Malt
14 Your Guide to a Quality Malt
16 Master Specification Tables

23 BASE MALTS
24 Finest Maris Otter® Ale Malt
26 Extra Pale Maris Otter® Malt
29 Chevallier® and The Heritage Malt Revival
30 Chevallier® Heritage Malt
32 Best Ale Malt
34 Extra Pale Malt
36 Europils Malt
38 German Pilsen Malt
40 Clear Choice® Malt
42 Clear Choice® Malt Extra Pale
44 Vienna Malt

47 COLOURED MALTS
48 Amber Malt
49 Brown Malt
50 Low Colour Chocolate Malt
51 Chocolate Malt
52 Black Malt
53 Roast Barley
54 Extra Light Crystal (Crystal 100)
55 Light Crystal (Crystal 150)
56 Medium Crystal (Crystal 240)
57 Dark Crystal (Crystal 400)
58 Crystal Rye Malt
59 Cara Gold Malt
60 Cara Malt

63 SPECIALITY MALTS
64 Light Munich Malt
65 Dark Munich Malt
66 Dextrin Malt
67 Wheat Malt
68 Rye Malt
69 Naked Oat Malt

70 FLOOR MALT
72 № 19 Maris Otter® Ale Malt

74 ORGANIC MALTS

77 NON-MALTED CEREALS
78 Torrefied Wheat
79 Flaked Torrefied Barley
80 Flaked Torrefied Maize
81 Flaked Torrefied Rice
82 Flaked Torrefied Oats

85 DISTILLING MALT
86 Premium Pot Still Malt
87 Peated Pot Still Malt
88 High Diastatic Power (HDP) Malt

90 OUR DISTRIBUTION NETWORK

92 PRODUCT PACKAGING

95 RECIPES

123 GET IN TOUCH

SINCE 1870

CRISP

THE FINEST MALT

When you visit our little part of the world there is a common place in every town and village that brings people together. When the weather is fine and the beer garden is bathed in sunshine, or even when it's wet and cold outside with the fireplace crackling away, we gather in the local pub to celebrate and commiserate with friends and family over a pint of beer.

As the tap is pulled back and the rush of foam enters the glass, that sound makes you anticipate the beautifully presented pint that is to follow. From the first sip, when the hops give way to the rich malt body of a well-crafted beer, we can't help but raise our glass to you, the brewer, whose passion and talent we celebrate right to the bottom of the glass.

We love great beer and without great malt you couldn't do what you do. Within these pages we're proud to present our range of malts that we have crafted and passed to you for your consideration. Use them, play around with them, create new and exciting beers with them and when that tap opens we will be toasting your labour of love.

CHEERS!

CRISP HISTORY

Frederick Edgar Smith

Crisp started out in 1870 when two brothers, Frederick and George Smith, recognised the unmatched quality of the barley in their home county of Norfolk and established a maltings at Great Ryburgh. Our Norfolk maltings is still our home and from our traditional floors, modern maltings and new Speciality Malt Plant we produce a huge range of malts for imaginative brewers, not just in the UK but all over the world. Wherever there is craft beer you'll find us.

Through our wholesale partners here in the UK and by direct delivery, we can fulfil any size of order from a few kilos to bulk truck loads. No matter what size your brewery, our team of brewers and maltsters will work with you to provide the technical back up to get the very best from our premium grains.

George Jacobs-Smith

THE CRISP TEAM

Our team may be a collection of maltsters, brewers, distillers, engineers, food scientists, lab techs and logistics specialists, but the one thing that unites us is a love of great beer and a desire to produce the great malt for your brewing needs. Here they are...

TECHNICAL SUPPORT

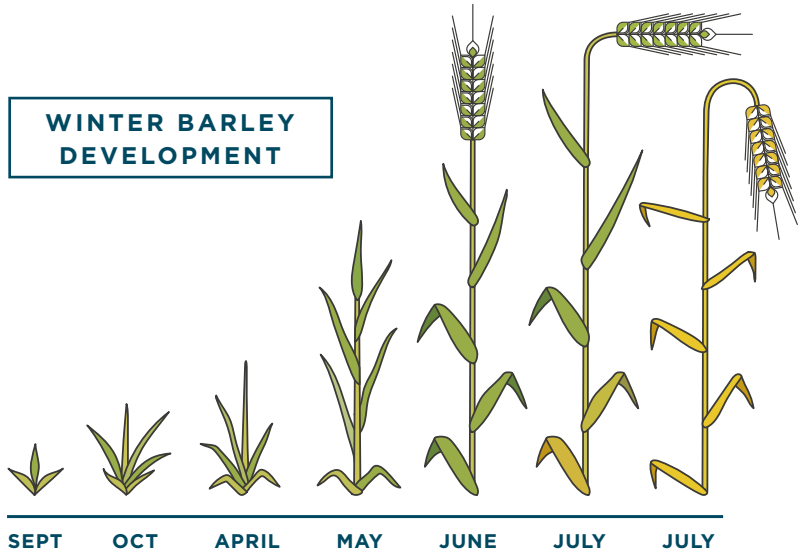
Our central lab in Norfolk is where all of our quality control takes place. We analyse every load of incoming barley, and every batch of malt we make, to ensure consistency and quality. These same services can be utilised by you to improve your processes or troubleshoot problems in the brewhouse. Grist analysis, spent grains analysis, micromalting, benchtop mashing and enzyme analysis are just some of the lab services we offer.

Our technical brewing team, Carl and Colin, have over 50 years in the industry between them and can assist with brewhouse optimisation, process improvement and recipe development. If you're starting up then we are more than happy to come along and help brew a batch to set you on the right path. We've helped countless customers fix issues and we are always here at the end of the phone or email to advise you on brewing techniques and best practice. We are constantly learning with our customers and we love to pass that knowledge along.

THE GROWING YEAR

Based in East Anglia, we are constantly reminded of the role of farming in our local community. If you've visited us in Norfolk, we're sure you'll have experienced being stuck behind tractors and combine harvesters as they roll slowly down the narrow roads of the county; a reminder of the important role of agriculture in our corner of the UK.

In winter the fields are covered in a carpet of Maris Otter®, just itching to get going once there is enough heat and light in the day. By spring the stalks have started to form and the barley proudly rises out of the ground throwing out its tillers that will eventually go to seed. Finally, there are those summer weeks when the whole of Norfolk seems to be covered in a shimmering sea of golden barley, ready to be harvested, dried and stored for another year of malting.



MARIS OTTER®
A NORFOLK HEIRLOOM

Tony Bambridge has been farming Maris Otter® on four hundred acres of North Norfolk land for 40 years, just 18 miles from our maltings. We asked him what makes Maris Otter® so special to this part of the world.

Tony Bambridge

"Norfolk, and especially this area in the north close to the sea, is one of the best places for growing malting barley in the world. We jut out into the North Sea which means we get a maritime climate that regulates the summer temperatures and provides moist air. This ensures a long, slow maturation of the barley with no intense heat. The other factor that makes for superb barley is the light, sandy, free draining soil. This means the soil doesn't hold onto nitrogen and results in a very low protein crop. We also have lots of naturally high levels of phosphate which aids in plant health."

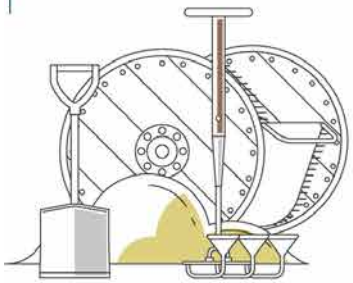
"We work with Crisp, and our merchant Banhams, because of the personal relationships we've built up over the years. It feels like very much a team effort. We are proud of the fact that the crop is local, has low food miles and is a named barley that goes into named products. We produce other crops and we don't know where they will eventually end up, but with our Maris Otter® we can see the beers in the pub and that is rewarding. All the better when we occasionally get to drink some of it!"

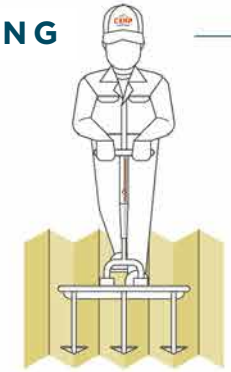
"A lot of care and attention goes into growing Maris Otter®. It's not easy and the farm yield is poor compared to other malting barleys but those relationships, the ability of this terroir to produce consistently superior grain year in year out means we will be growing Maris Otter® for a long time to come. "

> ***"Norfolk, and especially this area in the north close to the sea, is one of the best places for growing malting barley in the world.***

MAKING THE FINEST MALT

TRADITIONAL FLOOR MALTING



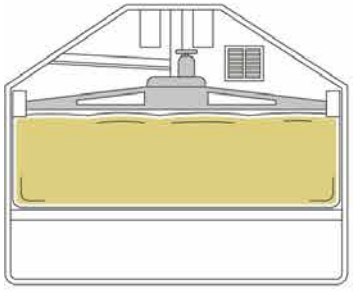


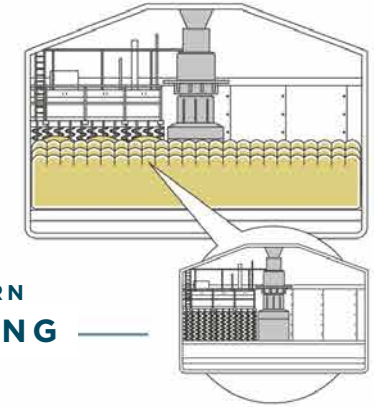
STAGE ONE
STEEPING

A batch of barley is selected and hydrated using up to three immersions in fresh water. We adjust the temperatures and the timing of wet and dry stages depending on the type and maturity of the barley and the final specification of malt we want.

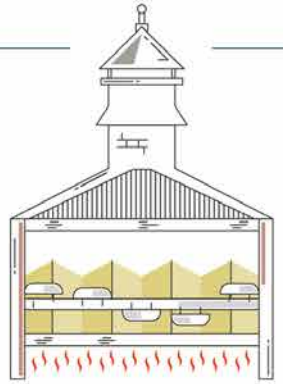
STAGE TWO
GERMINATION

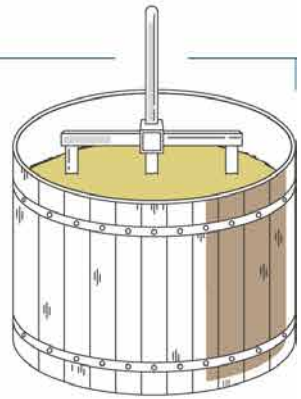
The sprouting barley is moved to a malting floor or vessel and allowed to grow for four to five days. The moisture and temperatures are controlled to a recipe we have tailored for the type of malt. This process naturally modifies the barley structure breaking down cell walls and protein, releasing starch and producing enzymes. During germination the 'green malt' must be turned to stop the rootlets matting.





MODERN MALTING



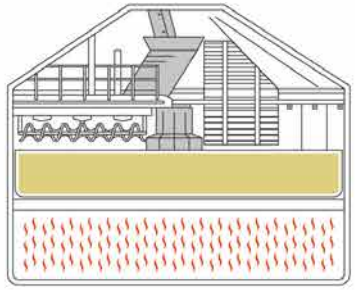


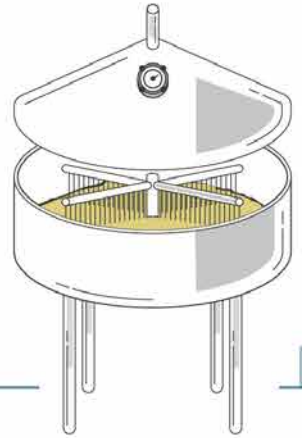
STAGE THREE
KILNING

Germination is stopped by gently drying on a kiln for up to three days. We use a stepped programme of temperatures and varying airflows to protect the enzymes within the grain and create the colour and flavour we are looking for. The rootlets are removed and the final malt is back to looking a little like barley but inside it now has all the extract, enzymes and nutrients essential to making great beer and whisky.

AT THE BREWERY
MASHING

The malt is crushed at the maltings or at the brewery and then mashed to convert the malt starch into sugars to create the wort. With the infinite number of malt and cereal combinations this is the starting point for a myriad of different flavours, colours and styles.





YOUR GUIDE TO A QUALITY MALT

Every Crisp customer has access to the Certificate of Analysis (COA) for the malt they have ordered.

This handy guide should help you get what you need from your COA.

Also view your COA online or by scanning the QR Code using our Crisp App!

SOLUBLE NITROGEN

The nitrogen (protein) that has been broken down in the malting process. Soluble nitrogen will aid head retention, provide yeast nutrition and add body and mouthfeel to the beer.

SOLUBLE NITROGEN RATIO (SNR)

The ratio of total to soluble nitrogen and gives a very good indication of the modification of the malt. We are looking for 38-42 for ale malt.

FRIABILITY

A measure of how easily the malt will mill. It is also a good measure of the extent of cell wall modification of the barley. A minimum of 85% is expected. If friability changes then you may need to adjust your milling regime.

DIASTATIC POWER

A measure of some of the starch degrading enzyme activity in the grain; the higher the DP the greater the conversion rate from starch to fermentable sugar. A minimum figure of 40 IoB is expected for base malts. If you're using lots of speciality malt or un-malted cereals then a higher DP may be beneficial to conversion.

MOISTURE

This measures how much water there is in the malt. A higher kilned malt will have a lower moisture. Typical maximum is 3.5% for Pale Malt and 4.5% for Extra Pale Malts. Remember to store grains in a dry environment for maximum shelf life.

TOTAL NITROGEN

(DRY BASIS)

An important measure of the nitrogen (protein) in the grain. The higher the protein, the lower the extract and vice versa. High protein will cause issues with clarity and fermentation. Ale malt should be around 1.35-1.55% and up to 1.75% for lager malt.

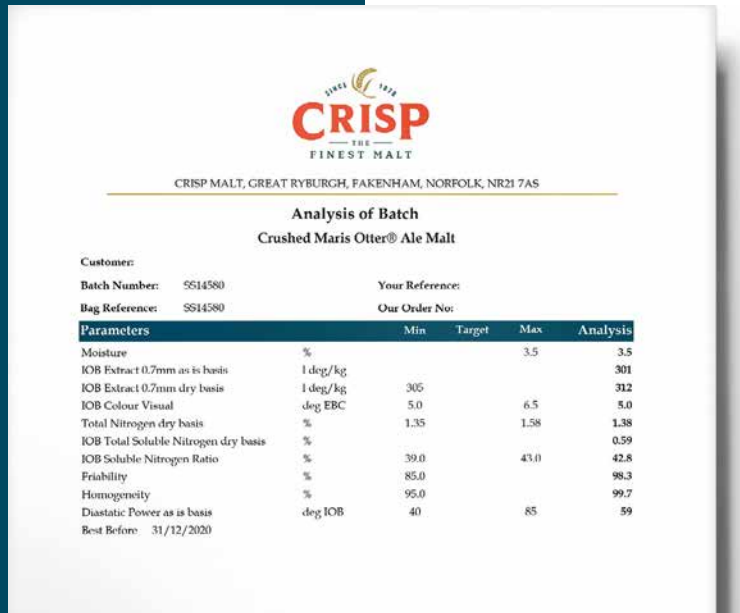
EXTRACT

(AS IS)

This is the amount of soluble material within the malt. The IoB method mashes the grain for 60 min at 65°C so it strongly approximates the infusion method of brewing. The EBC mashing method uses a stepped temperature programme so is more representative of a typical continental mashing process. This is the extract value used in calculations in the brewhouse.

(DRY BASIS)

This expression of extract takes into account the moisture content of the malt and allows direct comparison of extract between different malts. Base malts typically have a minimum 305 L°/kg extract dry basis.



CRISP
THE FINEST MALT

CRISP MALT, GREAT RYBURGH, FAKENHAM, NORFOLK, NR21 7AS

Analysis of Batch

Crushed Maris Otter® Ale Malt

Customer:

Batch Number: SS14580 **Your Reference:**

Bag Reference: SS14580 **Our Order No:**

Parameters		Min	Target	Max	Analysis
Moisture	%			3.5	3.5
IOB Extract 0.7mm as is basis	l deg/kg				301
IOB Extract 0.7mm dry basis	l deg/kg	305			312
IOB Colour Visual	deg EBC	5.0		6.5	5.0
Total Nitrogen dry basis	%	1.35		1.58	1.38
IOB Total Soluble Nitrogen dry basis	%				0.59
IOB Soluble Nitrogen Ratio	%	39.0		43.0	42.8
Friability	%	85.0			98.3
Homogeneity	%	95.0			99.7
Diastatic Power as is basis	deg IOB	40		85	59

Best Before 31/12/2020

CRAFT BREWING PRODUCT RANGE			TYPICAL IoB ANALYSIS								ATTRIBUTES
PRODUCT NAME	WHOLE	CRUSHED	MOISTURE MAX	EXTRACT TYPICAL	COLOUR RANGE		TOTAL NITROGEN RANGE		SNR RANGE		
BASE MALTS											
FINEST MARIS OTTER® ALE MALT	✔	✔	3.5	308	5.0	7.0	1.30	1.60	38	43	The consistently reliable Maris Otter® continues to provide the qualities expected by the brewer
EXTRA PALE MARIS OTTER® MALT	✔	✔	4.5	308	2.5	3.5	1.30	1.60	38	43	Lower colour version of Maris Otter® Ale Malt suitable for lager and golden ale brewing
CHEVALLIER® HERITAGE MALT	✔	✔	3.5	300	5.0	7.0	1.80		45		First malted in the 1820s, Chevallier® provides rich malty flavours to heritage and modern beer styles
BEST ALE MALT	✔	✔	3.5	310	5.0	7.0	1.40	1.65	38	43	The principal ingredient in cask and bottled ales, porters and stouts
EXTRA PALE MALT	✔	✔	4.5	310	2.5	3.5	1.40	1.65	38	43	Lower colour version of Best Ale Malt suitable for lager and golden ale brewing
EUROPILS MALT	✔	✔	4.5	308	2.5	3.5	1.50	1.75	33	37	Traditional European-style malt suitable for all pilsner types
GERMAN PILSEN MALT	✔	✔	4.5	302	3.0	4.0	1.52	1.90	32	38	Pilsen Malt produced at our Tivoli maltings in Hamburg suitable for continental-style brewing processes
CLEAR CHOICE MALT® ALE	✔	✔	4.0	308	5.5	7.5	1.45	1.80	37	46	Free from polyphenols thus reducing the risk of haze formation, increasing shelf life and reducing cold conditioning costs
CLEAR CHOICE MALT® EXTRA PALE	✔	✔	4.5	308	2.5	4.0	1.45	1.80	37	46	
VIENNA MALT	✔	✔	4.5	302	5.0	9.0	1.40	1.65			Vienna Malt is produced on a conventional kiln and provides a light golden hue
COLOURED MALTS											
AMBER MALT	✔	✔	2.0	275	55	75					Gives a dry, biscuity flavour to ales and provides red hue
BROWN MALT	✔	✔	2.0	275	110	135					Provides a smoothness to porters and other dark beers
LOW COLOUR CHOCOLATE MALT	✔	✔	2.0	272	400	600					A lighter version of our Chocolate Malt
CHOCOLATE MALT	✔	✔	2.0	272	850	1050					Gives dry, toasty flavours to rich, dark beers
BLACK MALT	✔	✔	2.0	270	1100	1400					Used to provide full, rich flavour to range of darker beer styles
ROAST BARLEY	✔	✔	2.0	270	1100	1400					Provides characteristic sharp, bitter flavour to stouts and some porters
EXTRA LIGHT CRYSTAL (CRYSTAL 100)	✔	✔	5.5	271	90	110					Provides sweet flavours and a light golden hue
LIGHT CRYSTAL (CRYSTAL 150)	✔	✔	5.0	271	145	165					Provides sweet, caramel flavours and a golden hue
MEDIUM CRYSTAL (CRYSTAL 240)	✔	✔	3.5	270	225	265					Used to adjust colour and flavour of ales, giving deep golden to red hues
DARK CRYSTAL (CRYSTAL 400)	✔	✔	3.0	270	380	435					Used to adjust colour and flavour of ales, giving red to deep red hues
CRYSTAL RYE MALT	✔	✔	5.0	270	200	400					Used to provide colour and spicy flavour
CARA GOLD MALT	✔	✔	6.5	280	12	16					Provides the opportunity to add body to beer with little impact on colour
CARA MALT	✔	✔	6.0	277	23	32					Used to adjust colour and flavour of light coloured beers
SPECIALITY MALTS											
LIGHT MUNICH MALT	✔	✔	4.5	299	15	25	1.60	1.80			Vienna and Munich malts are produced on a conventional kiln and provide light golden through to orange hues
DARK MUNICH MALT	✔	✔	4.5	299	35	45	1.60	1.80			
DEXTRIN MALT	✔	✔	7.0	300	2.0	3.0	1.40	2.00	26	35	Used to provide extra body to beer and to improve head retention
WHEAT MALT	✔	✔	6.5	320	2.5	5.0	2.20		38	46	Even when used in small quantities will improve foam and head retention in all beers
RYE MALT	✔	✔	6.0	328	12.0	32.0	1.60		37	46	Provides spicy complexity to ales and lagers
NAKED OAT MALT	✔	✔	5.5	245	2.0	7.0	2.70		11	14	Used in oatmeal stout, but can also provide smooth finish to ales
FLOOR MALTS	✔	✔									A range of bespoke ale, lager and distilling malts produced in our historic № 19 floor maltings®
ORGANIC MALTS											
ORGANIC ALE MALT	✔	✔	4.0	308	4.5	7.0	1.70		37	44	Malts produced from organic barley with full supply-chain traceability guaranteed
ORGANIC EXTRA PALE MALT	✔	✔	4.5	308	2.5	4.0	1.70		37	44	
ORGANIC CRYSTAL	✔	✔	5.0	270	150	170					
NON-MALTED CEREALS											
TORREFIED WHEAT	✔	✔	10.0	310							Pre-cooked, non-malted cereals provide the brewer with the opportunity for product differentiation. Flaked products can be added directly to the mash without the need for milling.
TORREFIED BARLEY	✔	✔	8.0	308							
FLAKED TORREFIED BARLEY		(Flaked)	10.0	308							
FLAKED TORREFIED MAIZE		(Flaked)	8.5	328							
FLAKED TORREFIED RICE		(Flaked)	8.5	305							
FLAKED TORREFIED OATS		(Flaked)	11.0	292							

CRAFT BREWING PRODUCT RANGE			TYPICAL EBC ANALYSIS								ATTRIBUTES
PRODUCT NAME	WHOLE	CRUSHED	MOISTURE MAX	EXTRACT TYPICAL	COLOUR RANGE		TOTAL PROTEIN RANGE		KI RANGE		
BASE MALTS											
FINEST MARIS OTTER® ALE MALT	✔	✔	3.5	81.5	5.5	7.5	8.0	10.0	43	48	The consistently reliable Maris Otter® continues to provide the qualities expected by the brewer
EXTRA PALE MARIS OTTER® MALT	✔	✔	4.5	81.5	2.8	4.0	8.0	10.0	43	48	Lower colour version of Maris Otter® Ale Malt suitable for lager and golden ale brewing
CHEVALLIER® HERITAGE MALT	✔	✔	3.5	80.0	5.5	7.5	11.3		50		First malted in the 1820s, Chevallier® provides rich malty flavours to heritage and modern beer styles
BEST ALE MALT	✔	✔	3.5	82.0	5.5	7.5	8.8	10.3	43	48	The principal ingredient in cask and bottled ales, porters and stouts
EXTRA PALE MALT	✔	✔	4.5	82.0	2.8	4.0	8.8	10.3	43	48	Lower colour version of Best Ale Malt suitable for lager and golden ale brewing
EUROPILS MALT	✔	✔	4.5	81.5	2.8	4.0	9.4	11.0	38	42	Traditional European-style malt suitable for all pilsner types
GERMAN PILSEN MALT	✔	✔	4.5	81.5	3.5	4.5	9.5	12.0	37	43	Pilsen Malt produced at our Tivoli maltings in Hamburg suitable for continental-style brewing processes
CLEAR CHOICE MALT® ALE	✔	✔	4.0	81.5	6.5	8.5	9.0	11.3	42	52	Free from polyphenols thus reducing the risk of haze formation, increasing shelf life and reducing cold conditioning costs
CLEAR CHOICE MALT® EXTRA PALE	✔	✔	4.5	81.5	2.8	4.5	9.0	11.3	42	52	
VIENNA MALT	✔	✔	4.5	80.0	5.5	10.0	8.8	10.3			Vienna Malt is produced on a conventional kiln and provides a light golden hue
COLOURED MALTS											
AMBER MALT	✔	✔	2.0	73.0	60	85					Gives a dry, biscuity flavour to ales and provides red hue
BROWN MALT	✔	✔	2.0	73.0	120	150					Provides a smoothness to porters and other dark beers
LOW COLOUR CHOCOLATE MALT	✔	✔	2.0	72.0	440	660					A lighter version of our Chocolate Malt
CHOCOLATE MALT	✔	✔	2.0	72.0	930	1155					Gives dry, toasty flavours to rich, dark beers
BLACK MALT	✔	✔	2.0	71.0	1210	1540					Used to provide full, rich flavour to range of darker beer styles
ROAST BARLEY	✔	✔	2.0	71.0	1210	1540					Provides characteristic sharp, bitter flavour to stouts and some porters
EXTRA LIGHT CRYSTAL (CRYSTAL 100)	✔	✔	5.5	72.0	100	120					Provides sweet flavours and a light golden hue
LIGHT CRYSTAL (CRYSTAL 150)	✔	✔	5.0	72.0	160	180					Provides sweet, caramel flavours and a golden hue
MEDIUM CRYSTAL (CRYSTAL 240)	✔	✔	3.5	71.0	245	290					Used to adjust colour and flavour of ales, giving deep golden to red hues
DARK CRYSTAL (CRYSTAL 400)	✔	✔	3.0	71.0	420	480					Used to adjust colour and flavour of ales, giving red to deep red hues
CRYSTAL RYE MALT	✔	✔	5.0	71.0	220	440					Used to provide colour and spicy flavour
CARA GOLD MALT	✔	✔	6.5	74.0	13	18					Provides the opportunity to add body to beer with little impact on colour
CARA MALT	✔	✔	6.0	73.0	25	35					Used to adjust colour and flavour of light coloured beers
SPECIALITY MALTS											
LIGHT MUNICH MALT	✔	✔	4.5	79.0	16.5	27.5	10.0	11.3			Vienna and Munich malts are produced on a conventional kiln and provide light golden through to orange hues
DARK MUNICH MALT	✔	✔	4.5	79.0	38	50	10.0	11.3			
DEXTRIN MALT	✔	✔	7.0	80.0	2.2	3.3	8.8	12.5	30	40	Used to provide extra body to beer and to improve head retention
WHEAT MALT	✔	✔	6.5	84.0	2.8	5.5	12.5		43	52	Even when used in small quantities will improve foam and head retention in all beers
RYE MALT	✔	✔	6.0	86.5	13	35	10.0		42	52	Provides spicy complexity to ales and lagers
NAKED OAT MALT	✔	✔	5.5	65.0	2.2	7.8	17.0		14	17	Used in oatmeal stout, but can also provide smooth finish to ales
FLOOR MALTS	✔	✔									A range of bespoke ale, lager and distilling malts produced in our historic № 19 floor maltings®
ORGANIC MALTS											
ORGANIC ALE MALT	✔	✔	4.0	81.5	5.0	7.5	10.6		42	50	Malts produced from organic barley with full supply-chain traceability guaranteed
ORGANIC EXTRA PALE MALT	✔	✔	4.5	81.5	2.8	4.5	10.6		42	50	
ORGANIC CRYSTAL	✔	✔	5.0	72.0	165	190					
NON-MALTED CEREALS											
TORREFIED WHEAT	✔	✔	10.0	82.0							Pre-cooked, non-malted cereals provide the brewer with the opportunity for product differentiation. Flaked products can be added directly to the mash without the need for milling.
TORREFIED BARLEY	✔	✔	8.0	81.0							
FLAKED TORREFIED BARLEY		(Flaked)	10.0	81.0							
FLAKED TORREFIED MAIZE		(Flaked)	8.5	86.5							
FLAKED TORREFIED RICE		(Flaked)	8.5	80.5							
FLAKED TORREFIED OATS		(Flaked)	11.0	77.0							

CRAFT BREWING PRODUCT RANGE			TYPICAL ASBC ANALYSIS								ATTRIBUTES
PRODUCT NAME	WHOLE	CRUSHED	MOISTURE MAX	EXTRACT TYPICAL	COLOUR RANGE		TOTAL PROTEIN RANGE		S/T RANGE		
BASE MALTS											
FINEST MARIS OTTER® ALE MALT	✔	✔	3.5	81.5	2.5	3.3	8.0	10.0	43	48	The consistently reliable Maris Otter® continues to provide the qualities expected by the brewer
EXTRA PALE MARIS OTTER® MALT	✔	✔	4.5	81.5	1.5	2.0	8.0	10.0	43	48	Lower colour version of Maris Otter® Ale Malt suitable for lager and golden ale brewing
CHEVALLIER® HERITAGE MALT	✔	✔	3.5	80.0	2.5	3.3	11.3		50		First malted in the 1820s, Chevallier® provides rich malty flavours to heritage and modern beer styles
BEST ALE MALT	✔	✔	3.5	82.0	2.5	3.3	8.8	10.3	43	48	The principal ingredient in cask and bottled ales, porters and stouts
EXTRA PALE MALT	✔	✔	4.5	82.0	1.5	2.0	8.8	10.3	43	48	Lower colour version of Best Ale Malt suitable for lager and golden ale brewing
EUROPILS MALT	✔	✔	4.5	81.5	1.5	2.0	9.4	11.0	38	42	Traditional European-style malt suitable for all pilsner types
GERMAN PILSEN MALT	✔	✔	4.5	81.5	1.5	2.0	10.0	11.0	38	42	Pilsen Malt produced at our Tivoli maltings in Hamburg suitable for continental-style brewing processes
CLEAR CHOICE MALT® ALE	✔	✔	4.0	81.5	3.0	4.0	9.0	11.3	42	52	Free from polyphenols thus reducing the risk of haze formation, increasing shelf life and reducing cold conditioning costs
CLEAR CHOICE MALT® EXTRA PALE	✔	✔	4.5	81.5	1.5	2.2	9.0	11.3	42	52	
VIENNA MALT	✔	✔	4.5	80.0	2.5	4.2	8.8	10.3			Vienna Malt is produced on a conventional kiln and provides a light golden hue
COLOURED MALTS											
AMBER MALT	✔	✔	2.0	73.0	23.0	85.0					Gives a dry, biscuity flavour to ales and provides red hue
BROWN MALT	✔	✔	2.0	73.0	45.7	57.0					Provides a smoothness to porters and other dark beers
LOW COLOUR CHOCOLATE MALT	✔	✔	2.0	72.0	166.5	249.5					A lighter version of our Chocolate Malt
CHOCOLATE MALT	✔	✔	2.0	72.0	351.5	436.5					Gives dry, toasty flavours to rich, dark beers
BLACK MALT	✔	✔	2.0	71.0	457.0	582.0					Used to provide full, rich flavour to range of darker beer styles
ROAST BARLEY	✔	✔	2.0	71.0	457.0	582.0					Provides characteristic sharp, bitter flavour to stouts and some porters
EXTRA LIGHT CRYSTAL (CRYSTAL 100)	✔	✔	5.5	72.0	38.2	45.7					Provides sweet flavours and a light golden hue
LIGHT CRYSTAL (CRYSTAL 150)	✔	✔	5.0	72.0	60.8	68.4					Provides sweet, caramel flavours and a golden hue
MEDIUM CRYSTAL (CRYSTAL 240)	✔	✔	3.5	71.0	93.0	110.0					Used to adjust colour and flavour of ales, giving deep golden to red hues
DARK CRYSTAL (CRYSTAL 400)	✔	✔	3.0	71.0	159.0	182.0					Used to adjust colour and flavour of ales, giving red to deep red hues
CRYSTAL RYE MALT	✔	✔	5.0	71.0	83.5	166.5					Used to provide colour and spicy flavour
CARA GOLD MALT	✔	✔	6.5	74.0	5.4	17.2					Provides the opportunity to add body to beer with little impact on colour
CARA MALT	✔	✔	6.0	73.0	9.9	13.7					Used to adjust colour and flavour of light coloured beers
SPECIALITY MALTS											
LIGHT MUNICH MALT	✔	✔	4.5	79.0	6.7	10.8	10.0	11.3			Vienna and Munich malts are produced on a conventional kiln and provide light golden through to orange hues
DARK MUNICH MALT	✔	✔	4.5	79.0	14.8	19.3	10.0	11.3			
DEXTRIN MALT	✔	✔	7.0	80.0	1.3	1.7	8.8	12.5	30	40	Used to provide extra body to beer and to improve head retention
WHEAT MALT	✔	✔	6.5	84.0	1.5	2.5	12.5		43	52	Even when used in small quantities will improve foam and head retention in all beers
RYE MALT	✔	✔	6.0	86.5	5.4	13.7	10.0		42	52	Provides spicy complexity to ales and lagers
NAKED OAT MALT	✔	✔	5.5	65.0	1.3	3.4	17.0		14	17	Used in oatmeal stout, but can also provide smooth finish to ales
FLOOR MALTS	✔	✔									A range of bespoke ale, lager and distilling malts produced in our historic № 19 floor maltings®
ORGANIC MALTS											
ORGANIC ALE MALT	✔	✔	4.0	81.5	2.3	3.3	10.6		42	50	Malts produced from organic barley with full supply-chain traceability guaranteed
ORGANIC EXTRA PALE MALT	✔	✔	4.5	81.5	1.5	2.2	10.6		42	50	
ORGANIC CRYSTAL	✔	✔	5.0	72.0	165	190					
NON-MALTED CEREALS											
TORREFIED WHEAT	✔	✔	10.0	82.0							Pre-cooked, non-malted cereals provide the brewer with the opportunity for product differentiation. Flaked products can be added directly to the mash without the need for milling.
TORREFIED BARLEY	✔	✔	8.0	81.0							
FLAKED TORREFIED BARLEY		(Flaked)	10.0	81.0							
FLAKED TORREFIED MAIZE		(Flaked)	8.5	86.5							
FLAKED TORREFIED RICE		(Flaked)	8.5	80.5							
FLAKED TORREFIED OATS		(Flaked)	11.0	77.0							

BASE MALTS

These are the workhorses of the mash; the ultimate source of your fermentable sugars, enzymes and nitrogenous compounds required for producing excellent beer. They need to deliver these each and every time you brew. Crisp have a wide range of base malts to provide you with a broad palate of flavours to build your beers upon. From the malt forward Maris Otter®, through our Best Ale and authentic German Pils to our honey-sweet Clear Choice®; we've got a range to suit every beer style and brewing method. Try them individually or mix them up to create something unique to you.

Some base malts, including Vienna and Dextrin, are made using the conventional kilning technique as described on pages 12 and 13. Using differing steeping, germination and kilning times and temperatures we can manipulate the flavours and colour formed in the malts.

CRISP
SINCE 1870
THE FINEST MALT

— FINEST —
MARIS OTTER®
ALE MALT

TASTING NOTES

MALTY, SWEET, BISCUIT

COLOUR (IoB)

5.0 – 7.0

BEER STYLES	USAGE RATE	RECIPE
Light, dark & strong milds, English ales, IPAs, stouts, porters, barley wines, golden ales	*Up to 100%*	*Crisp English ESB* *See page 112*

Maris Otter® Ale Malt is prized all over the world for the incredibly rich and moreish ales that it helps create. Our brewers tell us it is always flavourful, easy to brew with and returns that characteristic malt body that has made it famous over more than 50 years of barley cultivation.

Bred at PBI in Cambridge by Dr GDH Bell, the variety was taken up by Crisp farmers from the very beginning, since the barley thrives in the chalk soils and moist sea air of the North Norfolk coast.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	3.5% max	3.5% max	3.5% max
EXTRACT	308 L°/kg	81.5%	81.5%
COLOUR	5.0-7.0 EBC	5.5-7.5 EBC	2.5-3.3 °L
TN/TP	1.30-1.60%	8.0-10.0%	8.0-10.0%
SNR/KI/ST RATIO	38-43	43-48	43-48
DP/DPWK/LINTNER	45 min IoB	140 min WK	50 min °L

CRISP
SINCE 1870
THE FINEST MALT

—EXTRA PALE—

MARIS OTTER®
MALT

TASTING NOTES

MALTY, SWEET

COLOUR (IoB)
2.5 – 3.5

BEER STYLES	USAGE RATE	RECIPE
Blondes, pale ales	*Up to 100%*	*Crisp IPA* *See page 106*

At Crisp we also malt a low colour (Extra Pale) version of the Maris Otter® barley. This was originally developed for low colour beer production in traditional breweries where a higher level of modification is demanded for both efficient extract delivery and good brewhouse performance.

Due to the pale colour this can also be used for light continental styles or even cut with our Europils Malt to form a slight malt base for fuller lager styles.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.5% max	4.5% max	4.5% max
EXTRACT	308 L°/kg	81.5%	81.5%
COLOUR	2.5-3.5 EBC	2.8-4.0 EBC	1.5-2.0 °L
TN/TP	1.30-1.60%	8.0-10.0%	8.0-10.0%
SNR/KI/ST RATIO	38-43	43-48	43-48
DP/DPWK/LINTNER	50 min IoB	150 min WK	55 min °L

CHEVALLIER® AND THE HERITAGE MALT REVIVAL

One day in 1824, a nineteenth century labourer found an ear of barley in his boot and planted the seeds in the farm garden of his employer, the Reverend Dr John Chevallier. They sprouted and grew into such splendid specimens of the cereal that the good doctor embarked on a project to propagate the plants in earnest.

So fine were the grains, so good the malting, and so successful the brewing that the Reverend's barley became the mother-crop for generations of the cereal. For nearly 100 years, Chevallier® was the main barley variety in Britain, loved by maltsters and used by brewers across the nation.

Nearly 200 years later, Crisp is working with New Heritage Barley Ltd to revive and grow Chevallier® barley once again. Every year we produce small batches of this exquisite grain to showcase its uniquely rich and biscuit flavours and aromas.

CRISP
SINCE 1870
THE FINEST MALT

CHEVALLIER HERITAGE MALT®

Alternative malt for Maris Otter® Ale Malt

TASTING NOTES

DEEPLY MALTY,
MARMALADE SWEETNESS

COLOUR (IoB)
5.0 – 7.0

BEER STYLES	USAGE RATE	RECIPE
Golden ales, barley wines, IPAs, DIPAs	*80 – 100%**	*Crisp Victorian Steampunk Ale* *See page 108*

Crisp Chevallier® is characterised by warm cracker and biscuit aromas with a full flavour. Compared to many modern barleys its aroma and flavour are quite pronounced.

Suitable for any malt-forward ale such as a big robust barley wine. Alternatively, it can be used in modern recipes where there is a need to balance a high bitter hop load such as in a Double India Pale Ale.

**Let the heritage malt come through, go light on specials.*

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	3.5% max	3.5% max	3.5% max
EXTRACT	300 L°/kg	80.0%	80.0%
COLOUR	5.0-7.0 EBC	5.5-7.5 EBC	2.5-3.3 °L
TN/TP	1.80%	11.3%	11.3%
SNR/KI/ST RATIO	45	50	50
DP/DPWK/LINTNER	55 min IoB	150 min WK	60 min °L

BEST ALE MALT

TASTING NOTES

BALANCED MALT
SWEETNESS

COLOUR (IoB)
5.0 – 7.0

BEER STYLES	USAGE RATE	RECIPE
Light, dark & strong milds, English ales, IPAs, stouts, porters, barley wines	*Up to 100%*	*Crisp Golden Ale See page 105*

Our Best Ale Malt is the workhorse of many a brewery and is at home in a variety of beer styles. The 2-row winter barley varieties that go into our Best Ale have been planted in the light, sandy soils of North Norfolk. We source the lowest nitrogen barley from our farmers.

During malting, high cast moistures and a balance of optimal germination time and temperature results in an even, well modified malt with a rich colour and balanced sweet, malt flavour which is ideally suited to ale brewing.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	3.5% max	3.5% max	3.5% max
EXTRACT	310 L°/kg	82.0%	82.0%
COLOUR	5.0-7.0 EBC	5.5-7.5 EBC	2.5-3.3 °L
TN/TP	1.40-1.65%	8.8-10.3%	8.8-10.3%
SNR/KI/ST RATIO	38-43	43-48	43-48
DP/DPWK/LINTNER	45 min IoB	140 min WK	50 min °L

EXTRA PALE MALT

TASTING NOTES

SUBTLE MALT SWEETNESS

COLOUR (IoB)
2.5 – 3.5

BEER STYLES	USAGE RATE	RECIPE
Golden ales, blondes, lagers, pale ales	*Up to 100%*	*Crisp IPA* *See page 106*

Crisp have developed a low colour Extra Pale Malt for low colour beer styles such as lager, blondes and pale ales. Made from the same barley as our Best Ale Malt you can be assured it is Norfolk born and bred.

It is perfectly suited to the traditional UK brewing style where a single strike temperature is used as the malt has a moderate to high level of modification which gives excellent extract, flavour and run-off.

Use it at 100% for lagers and pale ales or mix in some speciality malts for just about any hop driven beer style.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.5% max	4.5% max	4.5% max
EXTRACT	310 L°/kg	82.0%	82.0%
COLOUR	2.5-3.5 EBC	2.8-4.0 EBC	1.5-2.0 °L
TN/TP	1.40-1.65%	8.8-10.3%	8.8-10.3%
SNR/KI/ST RATIO	38-43	43-48	43-48
DP/DPWK/LINTNER	50 min IoB	145 min WK	55 min °L

EUROPILS MALT

Also known as Lager Malt

TASTING NOTES

SWEET, NON-MALTY

COLOUR (IoB)
2.5 – 3.5

BEER STYLES	USAGE RATE	RECIPE
All lagers & light ales	*80 – 100%*	*Crisp Pre-prohibition Lager* *See page 98*

We take English spring barley with a slightly higher protein than our Best Ale Malt and the subsequent low temperature kilning produces Lager Malt with a sweet but not "malty" character.

Lager malts from continental Europe tend to be higher in protein, have less modification and a lower SNR which means the malt then requires processing in a rising temperature programme. This is the reason that decoction and heated mash vessels are the dominant brewing system on the continent.

However, Europils has been optimised for UK brewing and so it works comfortably in a UK single strike temperature brewery or on a continental system.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.5% max	4.5% max	4.5% max
EXTRACT	308 L°/kg	81.5%	81.5%
COLOUR	2.5-3.5 EBC	2.8-4.0 EBC	1.5-2.0 °L
TN/TP	1.50-1.75%	9.4-11.0%	9.4-11.0%
SNR/KI/ST RATIO	33-37	38-42	38-42
DP/DPWK/LINTNER	60 min IoB	200 min WK	66 min °L

GERMAN PILSEN MALT

TASTING NOTES

SWEET, GRASSY, GRAINY

COLOUR (IoB)
2.5 – 3.5

BEER STYLES	USAGE RATE	RECIPE
Continental lager malt	*Up to 100%*	*Crisp German Pilsner* *See page 97*

At our Hamburg maltings we malt Danish and German spring barley to produce a classic German Pilsen style malt for lager production.

With a high protein content this malt benefits from a rising temperature programme and lautering, but our customers have also used it successfully in traditional UK brewhouses.

The higher molecular weight proteins give excellent head retention and mouthfeel. High levels of speciality malt and non-malted cereals can be used with this malt while maintaining fermentation vigour. This malt can be used in single temperature mashing but you may need to increase finings rates to drop out the additional protein.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.5% max	4.5% max	4.5% max
EXTRACT	302 L°/kg	81.5%	81.5%
COLOUR	3.0-4.0 EBC	3.5-4.5 EBC	1.5-2.0 °L
TN/TP	1.52-1.90%	9.5-12.0%	10.0-11.0%
SNR/KI/ST RATIO	32-38	37-43	38-42
DP/DPWK/LINTNER	65 min IoB	230 min WK	70 min °L

CRISP
SINCE 1870
THE FINEST MALT

CLEAR CHOICE MALT®

ALE

TASTING NOTES

HONEY MALTY,
SWEETNESS

COLOUR (IoB)
5.5 – 7.5

BEER STYLES	USAGE RATE	RECIPE
All ale styles	*80 – 100%*	*Crisp NEIPA* *See page 107*

Clear Choice® is a unique offering from Crisp. Our specially selected barley variety has no proanthocyanidins; these are flavonoid polyphenols that impart astringency and also form chill haze with proteins in the final beer. After fining or filtration, the result is a super clear, shelf stable wort with beautiful honey sweetness.

We also recommend using Clear Choice® for cloudy beers where oxidative darkening of polyphenols is a concern. The clarity benefits of Clear Choice® are not just evident in bottle, can and keg, but also help produce extremely bright cask beer too.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.0% max	4.0% max	4.0% max
EXTRACT	308 L°/kg	81.5%	81.5%
COLOUR	5.5-7.5 EBC	6.5-8.5 EBC	3.0-4.0 °L
TN/TP	1.45-1.80%	9.0-11.3%	9.0-11.3%
SNR/KI/ST RATIO	37-46	42-52	42-52
DP/DPWK/LINTNER	45 min IoB	140 min WK	50 min °L

CLEAR CHOICE MALT®

EXTRA PALE

TASTING NOTES

HONEY SWEETNESS

COLOUR (IoB)
2.5 – 4.0

BEER STYLES	USAGE RATE	RECIPE
Golden ales & lagers	*80 – 100%*	*Crisp German Kolsch* *See page 101*

This is the low colour version of our Clear Choice® Ale Malt. Kilned to a lower temperature than our regular Clear Choice® results in a lighter colour and a delicate sweetness which acts as the perfect base to build robust IPA hop profiles on.

Since heavily hopped beers can contribute high levels of polyphenol content, by eliminating this from the barley (which typically contributes 80% of polyphenol in a regular beer) we can ensure a malt that will aid in the production of bright, heavily-hopped IPAs.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.5% max	4.5% max	4.5% max
EXTRACT	308 L°/kg	81.5%	81.5%
COLOUR	2.5-4.0 EBC	2.8-4.5 EBC	1.5-2.2 °L
TN/TP	1.45-1.80%	9.0-11.3%	9.0-11.3%
SNR/KI/ST RATIO	37-46	42-52	42-52
DP/DPWK/LINTNER	50 min IoB	150 min WK	55 min °L

VIENNA MALT

TASTING NOTES

SUBTLE MALT SWEETNESS & TOAST OR BREAD NOTES

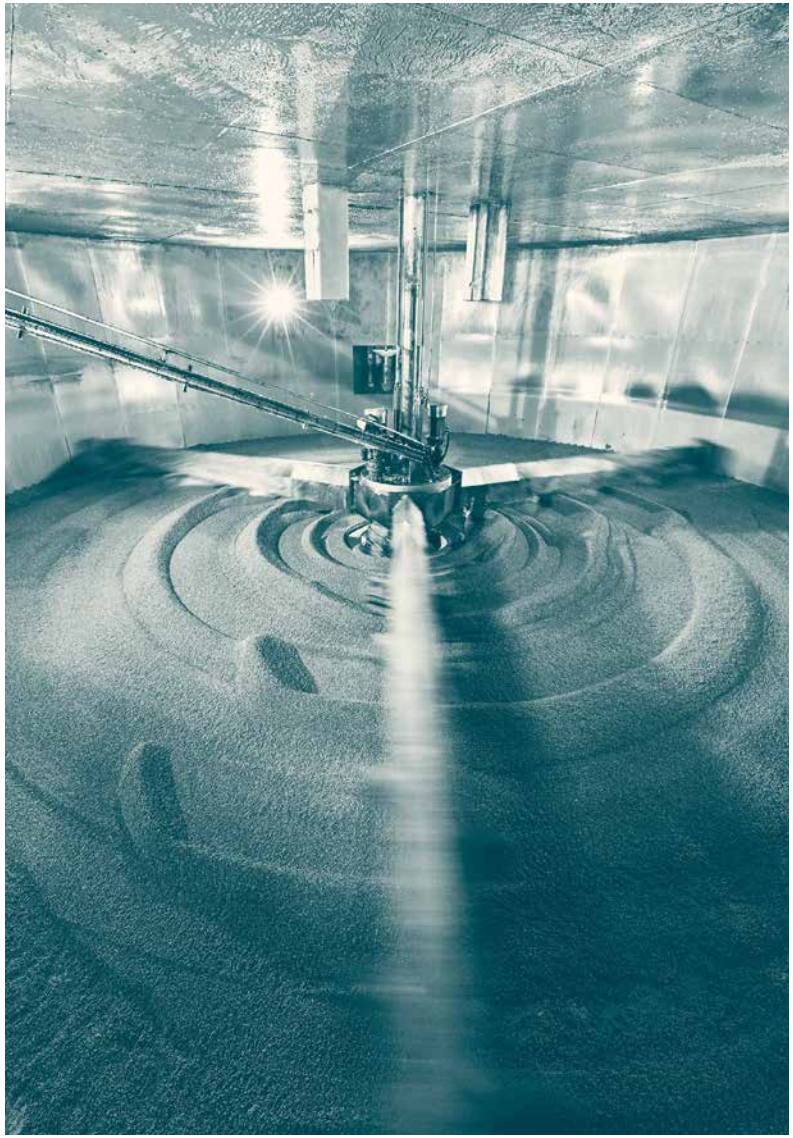
BEER STYLES	USAGE RATE	RECIPE
Vienna lager, altbier, kellerbier, kolsch	*Up to 100%*	*Crisp Vienna Lager* *See page 99*

In the 1840s English maltsters developed air kilning techniques that would pave the way for light coloured beers. German brewers took this technique back to Vienna and Munich respectively and the malt styles were born.

Our Vienna Malt is made from English 2-row spring barley and is kilned to a slightly higher temperature than our Best Ale Malt. The result is a golden hued wort with a sweet, bread like aroma and flavour. Since it is a conventionally kilned malt, Vienna can be used as a base and is perfect creating its namesake, Vienna lager, in addition to other styles.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.5% max	4.5% max	4.5% max
EXTRACT	302 L°/kg	80.0%	80.0%
COLOUR	5.0-9.0 EBC	5.5-10.0 EBC	2.5-4.2 °L
TN/TP	1.40-1.65%	8.8-10.3%	8.8-10.3%



COLOURED MALTS

Leaving the world of conventional kilning behind, we move on to a range of malt where major increases in process temperature are required. The higher colours and stronger flavours of our roasted malts are a result of the same Maillard chemistry that forms the intense aromas and colour of roast coffee, or the delicate biscuit taste in a beautifully baked loaf of bread.

We manage this transformation inside our Speciality Malt Plant by carefully controlling the temperature of the heated surfaces that the grain comes into contact with. Our RevTech speciality malt process is the first of its kind in the UK and gives us unparalleled control over colour formation and flavour profile. It uses less energy than a conventional roasting drum and the grains don't come in contact with combustion gasses due to its all electric nature. The gentle transport of the grain through the column means we can roast just about any cereal, not just malted barley.

AMBER MALT

Also known as Biscuit Malt

TASTING NOTES

DRY, BISCUIT, BREADY, SLIGHTLY TOASTED, NO RESIDUAL SWEETNESS

BEER STYLES	USAGE RATE	RECIPE
Old ales, mild ales, brown ales, bitters, dark ales	*Up to 5%*	*Crisp Amber Ale See page 109*

This is the palest malt made using a roasting technique. After conventional kilning, the malt is dry and pale in colour hence it is known as “white malt”. It is transferred to our Speciality Malt Plant and passes through the roasting column where the flavour is transformed through the application of heat. The temperatures used through the column determine the colour and flavour of the roasted malt.

Amber Malt is typified by a dry, toasted biscuit finish and can add an amber hue to the beer.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	2.0% max	2.0% max	2.0% max
EXTRACT	275 L°/kg	73.0%	73.0%
COLOUR	55-75 EBC	60-85 EBC	23-85 °L

BROWN MALT

TASTING NOTES

TOASTED BREAD, DRY, NON-SWEET, RICH

BEER STYLES	USAGE RATE	RECIPE
Old ales, mild ales, brown ales, bitters, dark ales, porters	*Up to 5%*	*Crisp Brown Ale See page 117*

The next stage up from Amber Malt is our Brown Malt. The colour is produced in the same manner as Amber, but is roasted for that bit longer to give a nutty roast dryness with a light brown hue, perfect for brown ales and milds.

Remember that when assessing roasted malts, it is the resultant colour and flavour of the wort and beer that is important rather than the colour of the outer barley husk of the malt in your hand.

Different varieties of barley may give roasted malts with differing husk colour, but will produce wort with the expected colour and flavour when mashed.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	2.0% max	2.0% max	2.0% max
EXTRACT	275 L°/kg	73.0%	73.0%
COLOUR	110-135 EBC	120-150 EBC	45.7-57.0 °L

LOW COLOUR CHOCOLATE MALT

TASTING NOTES

SUBTLE CHOCOLATE, COFFEE AROMAS & COLOUR

BEER STYLES	USAGE RATE	RECIPE
Stouts, porters, strong mild	*Up to 5%*	*Crisp Dark Mild* *See page 114*

Another step up in colour into the chocolate range, so called because of the flavour it produces in the final beer, not due to the presence of actual chocolate.

Low Colour Chocolate Malt imparts a delicate chocolate aroma and taste much like a mellow cold brew coffee. This malt type lacks the astringency of the more darkly roasted malts.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	2.0% max	2.0% max	2.0% max
EXTRACT	272 L°/kg	72.0%	72.0%
COLOUR	400-600 EBC	440-660 EBC	166.5-249.5°L

CHOCOLATE MALT

TASTING NOTES

DEEP CHOCOLATE, COFFEE AROMAS & COLOUR

BEER STYLES	USAGE RATE	RECIPE
Stouts, porters, strong mild	*Up to 5%*	*Crisp London Porter* *See page 118*

Chocolate Malt shares many of the characteristics of Black Malt, but because it is roasted for a shorter period of time and to a lower final temperature, it lacks the astringency of Black Malt.

Its main use is in darker beers that require a depth of colour to tend the eye and entice the palate. Chocolate Malt has been used in Irish stout for years and the marriage of Chocolate Malt and Roasted Barley in varying proportions can give rise to a range of flavours from sweet and mellow to acrid and bitter.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	2.0% max	2.0% max	2.0% max
EXTRACT	272 L°/kg	72.0%	72.0%
COLOUR	850-1050 EBC	930-1155 EBC	351.5-436.5°L

BLACK MALT

Also known as Patent Malt

TASTING NOTES

ROASTED COFFEE, LIQUORICE, CURRANTS

BEER STYLES	USAGE RATE	RECIPE
Porters, stouts	*Up to 3%*	*Crisp Imperial Stout See page 121*

The darkest of our roasted malts. When you need an intensely dark colour for stouts and porters this is an excellent malt to use. Despite its reputation as a highly astringent malt, nothing could be further from the truth. This malt brings with it a roasted character with some bitterness and astringency, but also flavours of currants and berries.

This malt can also be used for the colour adjustment of pale beers either in the mash or by sprinkling on top of the mash at the sparge stage, to impart a ruby hue.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	2.0% max	2.0% max	2.0% max
EXTRACT	270 L°/kg	71.0%	71.0%
COLOUR	1100-1400 EBC	1210-1540 EBC	457.0-582.0 °L

ROAST BARLEY

TASTING NOTES

ROASTED COFFEE, BURNT/ BITTER FLAVOURS (AT HIGHER %)

BEER STYLES	USAGE RATE	RECIPE
Stouts	*Up to 5%*	*Crisp Irish Stout See page 119*

Roast Barley is our darkest grain and it is made from unmalted barley. The colour produced can be almost opaque and the flavour is similar to a dark, bitter roast coffee. In stouts a combination of Chocolate, Black Malt and Roast Barley gives excellent complexity and balance.

Remember that these dark grains will have an acidifying effect on the mash, so ensure your salts have been adjusted adequately.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	2.0% max	2.0% max	2.0% max
EXTRACT	270 L°/kg	71.0%	71.0%
COLOUR	1100-1400 EBC	1210-1540 EBC	457.0-582.0°L

EXTRA LIGHT CRYSTAL (CRYSTAL 100)

TASTING NOTES

SUBTLE CARAMEL FLAVOUR

BEER STYLES	USAGE RATE	RECIPE
Milds, bitters, best bitters	*Up to 10%*	*Crisp Mild See page 113*

Crystal and Cara Malts are so named for the caramelisation and crystallization of the sugars present in the barley kernel. We take green malt from germination and by applying heat while maintaining the moisture content we are able to liquify the endosperm of the barley, transforming the starch into sugars. Heat is then applied and the caramelisation begins.

In the case of Crystal Malts, when the endosperm cools, sugar crystals are formed. When you cut across the grain the glassy sheen of crystalized sugar can be seen.

Each Crystal Malt imparts a clean, nutty, caramel-like sweetness to your beers. Extra Light Crystal gives a subtle caramel flavour.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	5.5% max	5.5% max	5.5% max
EXTRACT	271 L°/kg	72.0%	72.0%
COLOUR	90-110 EBC	100-120 EBC	38.2-45.7 °L

LIGHT CRYSTAL (CRYSTAL 150)

TASTING NOTES

INTENSE CARAMEL FLAVOUR

BEER STYLES	USAGE RATE	RECIPE
Bitters, best bitters, milds	*Up to 10%*	*Crisp Best Bitter See page 111*

To make Light Crystal we increase the temperature further and the endosperm darkens and flavours develop further. Think of Crystal Malts like you would make caramel at home. With Light Crystal the crystalised sugars present imparts an intense caramel flavour. Light Crystal will also impart a reddish hue to the beer and it works very well in Bitters and Ruby beers.

The number after the word Crystal refers to the EBC colour of the malt if you mashed at 100% of the grain bill. To get a rough conversion to Lovibond, just divide by two.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	5.0% max	5% max	5% max
EXTRACT	271 L°/kg	72.0%	72.0%
COLOUR	145-165 EBC	160-180 EBC	60.8-68.4 °L

MEDIUM CRYSTAL (CRYSTAL 240)

TASTING NOTES

TREACLE TOFFEE, DARK CARAMEL

BEER STYLES	USAGE RATE	RECIPE
Best bitters, milds, porters, (not stouts)	*Up to 10%*	*Crisp Strong Mild* *See page 115*

With Medium Crystal those intense caramel flavours of thick treacle toffee are developed. To achieve these kinds of flavours the temperature is raised a further step from Light Crystal and the sugars darken further still giving the beer a deep copper hue.

Remember that Crystal Malts have no enzymes or FAN preserved so be careful with the addition rate in your mash. You want to add enough to get the depth of flavour desired, but not so much that you will have issues in fermentation due to a lack of nutrients.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	3.5% max	3.5% max	3.5% max
EXTRACT	270 L°/kg	71.0%	71.0%
COLOUR	225-265 EBC	245-290 EBC	93-110 °L

DARK CRYSTAL (CRYSTAL 400)

TASTING NOTES

DRIED FRUITS

BEER STYLES	USAGE RATE	RECIPE
Ruby, porters	*Up to 10%*	*Crisp Ruby* *See page 116*

Dark Crystal Malt has the highest degree of caramelisation. The flavours are now transformed into sultanas, raisins, plums and dark, dried fruits. By now the sugars are actually being broken down by chemical processes and so the residual sweetness that the other Crystal Malts impart are being replaced by an increase in bitter flavours.

Crystal Malt sugars are non-fermentable so add a level of dextrin sugars that are preserved through to the final beer.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	3.0% max	3.0% max	3.0% max
EXTRACT	270 L°/kg	71.0%	71.0%
COLOUR	380-435 EBC	420-480 EBC	159-182 °L

CRYSTAL RYE MALT

TASTING NOTES

SWEET, SPICY, WARMING CHARACTER

BEER STYLES	USAGE RATE
Rye IPAs, rye pale ales, red ale, roggenbier	*Up to 10%*

By passing still moist malted rye through the crystallisation process, we can accentuate the spicy flavours that are characteristic of the grain. Not only is the flavour enhanced, but the sugars present take on a red hue, a much sought after attribute in red ales.

Try it in a variety of styles including traditional Irish reds, German roggenbier or in modern hop forward IPA and DIPAs.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	5.0% max	5.0% max	5.0% max
EXTRACT	270 L°/kg	71.0%	71.0%
COLOUR	200-400 EBC	220-440 EBC	83.5-166.5 °L

CARA GOLD MALT

TASTING NOTES

FRUITY

BEER STYLES	USAGE RATE	RECIPE
All beer styles (foam and mouthfeel)	*Up to 15%*	*Crisp Golden Ale See page 105*

Cara Gold is the lowest colour of the crystallised malts. Cara Gold yields fruity and toffee flavour notes that are carried through to the beer.

This low malt colour produces a golden orange lager with increased body and fullness, and a softer, rounder mouthfeel with improved drinkability.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	6.5% max	6.5% max	6.5% max
EXTRACT	280 L°/kg	74.0%	74.0%
COLOUR	12-16 EBC	13.0-18.0 EBC	5.4-17.2 °L

CARA MALT

TASTING NOTES

SWEET CARAMEL, MALTY

BEER STYLES	USAGE RATE	RECIPE
All beer styles (foam and mouthfeel)	*Up to 15%*	*Crisp Session Bitter* *See page 110*

Cara Malt is a very low colour Crystal Malt which has an almost completely glassy endosperm. It contains a greater degree of sweetness than Crystal Malt and the harsher nutty roasted flavours are not present.

It greatly improves body, foam retention and beer stability whilst adding little colour. It has therefore, become very popular in the production of lagers where it is used to assist in enhancing flavour and character. For this reason it has also become a common constituent in low alcohol beers.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	6.0% max	6.0% max	6.0% max
EXTRACT	277 L°/kg	73.0%	73.0%
COLOUR	23-32 EBC	25.0-35.0 EBC	9.9-13.7 °L

SPECIALITY MALTS

If you're looking for something different, try some of our specialist malt. Using rye, wheat or oats can help to enhance the body and improve head retention, whilst creating deep flavours and spice to the beer.

By malting these grains using a variety of techniques, including our RevTech Speciality Malt Plant, our maltsters are able to elevate these humble grains into malts that are bursting with flavour and mouthfeel.

As new beer styles emerge it is often the malts that shine bright; from the creamy body of a NEIPA created by adding our Naked Oat Malt, to the deep red tone and spice notes in a Rye IPA from our high colour Rye Malt, our speciality malts are here to add that something extra.

LIGHT MUNICH MALT

TASTING NOTES

RICH MALTY & BREAD CRUST FLAVOURS

BEER STYLES	USAGE RATE	RECIPE
Marzen, maibock	*Up to 100%*	*Crisp German Maibock* *See page 102*

Our Light Munich Malt is created by taking Vienna Malt a stage further in the kiln. The additional heat promotes melanoidin reactions to produce rich bread crust flavours. Again, Light Munich Malt can be used as a base since the enzymes are suitably preserved in this malt.

The use of Munich and Vienna Malts are not just for German style beers, they add a beautiful subtle complexity to many beer styles.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.5% max	4.5% max	4.5% max
EXTRACT	299 L°/kg	79.0%	79.0%
COLOUR	15-25 EBC	16.5-27.5 EBC	6.7-10.8 °L
TN/TP	1.60-1.80%	10.0-11.3%	10.0-11.3%

DARK MUNICH MALT

TASTING NOTES

RICH MALT, BREAD CRUST, GRAINY

BEER STYLES	USAGE RATE
Dunkel, bock, doppelbock	*We recommend 15-20%**

A magical thing happens when amino acids and reducing sugars combine at critical temperatures; the Maillard reaction. Starting with higher protein spring barley we germinate to higher levels of modification then adjust early kilning conditions to utilise the malt enzymes to hydrolyse protein and convert starch in sugars.

Finally, a long drying phase with a higher temperature results in the Maillard reaction taking place to produce pronounced rich malt, freshly baked bread crust and the characteristic Munich bite at the back of the palate.

**Up to 100% (lower DP and extract than light Munich so at 100% less speciality malt can be added).*

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.5% max	4.5% max	4.5% max
EXTRACT	299 L°/kg	79.0%	79.0%
COLOUR	35-45 EBC	38-50 EBC	14.8-19.3 °L
TN/TP	1.60-1.80%	10.0-11.3%	10.0-11.3%

DEXTRIN MALT

Alternative malt for CaraPils, CaraFoam, Torrefied Wheat

TASTING NOTES

NEUTRAL (UP TO 10%)

BEER STYLES	USAGE RATE	RECIPE
Added as a foam and body enhancer	*5-15%*	*Crisp Table Beer See page 100*

Dextrin Malt is produced by constraining the germination phase, which results in retention of higher molecular weight polysaccharides which will provide positive attributes to the finished beer in terms of greater body and mouthfeel. These dextrins will contribute positively to head formation.

This malt can be particularly beneficial when brewing with well modified Extra Pale Malt to produce golden ales or pilsner-style beers. The low colour permits usage rates of up to 15% without impacting on final product colour. It can be useful in a low gravity beer such as a session IPA that is trying to emulate a higher gravity beer in terms of body.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	7.0% max	7.0% max	7.0% max
EXTRACT	300 L°/kg	80.0%	80.0%
COLOUR	2.0-3.0 EBC	2.2-3.3 EBC	1.3-1.7 °L
TN/TP	1.40-2.00%	8.8-12.5%	8.8-12.5%
SNR/KI/ST RATIO	26-35	30-40	30-40

WHEAT MALT

TASTING NOTES

TOUCH OF ACIDITY, GENTLE, REFRESHING & CREAMY

BEER STYLES	USAGE RATE	RECIPE
Hefeweizen, wheat beers, wit	*Up to 50% - huskless so watch run off*	*Crisp Irish Stout See page 119*

In brewing, Wheat Malt can be used as the base malt at around 55% inclusion for wheat beers.

When mixed with barley malt, Wheat Malt can improve head retention, improve mouthfeel and introduce flavour changes in other beer types.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	6.5% max	6.5% max	6.5% max
EXTRACT	320 L°/kg	84.0%	84.0%
COLOUR	2.5-5.0 EBC	2.8-5.5 EBC	1.5-2.5 °L
TN/TP	2.20%	12.5%	12.5%
SNR/KI/ST RATIO	38-46	43-52	43-52
DP/DPWK/LINTNER	130 min IoB	400 min WK	143 min °L

RYE MALT

TASTING NOTES

EARTHY, SPICY AFTER-TASTE

BEER STYLES	USAGE RATE	RECIPE
Rye IPAs, rye pale ales, red ale, roggenbier	*Up to 15%**	*Crisp London Porter See page 118*

In brewing, when mixed with barley malt, Rye Malt can improve head retention, improve mouthfeel and introduce flavour changes of a toffee/caramel note at lower inclusion rates and a spicy after-palate at higher inclusion rates.

Most notably, Rye Malt will also impart a reddish hue to beers.

**Rye Malt is higher in beta glucans which can cause issues at higher rates. Recommend rice hulls.*

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	6.0% max	6.0% max	6.0% max
EXTRACT	328 L°/kg	86.5%	86.5%
COLOUR	12.0-32.0 EBC	13-35 EBC	5.4-13.7 °L
TN/TP	1.60%	10.0%	10.0%
SNR/KI/ST RATIO	37-46	42-52	42-52
DP/DPWK/LINTNER	45 min IoB	180 min WK	62 min °L

NAKED OAT MALT

TASTING NOTES

CREAMY, OATY

BEER STYLES	USAGE RATE	SEE RECIPE
NEIPAs, oatmeal stout, oaty pale ales	*Up to 30%*	*Crisp Oaty Pale Ale See page 104*

Crisp Naked Oat Malt has become a stalwart of the NEIPA recipe. We malt naturally naked oats to increase potential extract. Naked Oat Malt gives a lovely creaminess and mouthfeel in all styles of beer and is especially suited to juicy hop bombs and heavy beers. They also impart a toasted, biscuit aroma and palate.

Oats are high in β-glucan and for both brewing and baking uses Naked Oat Malt can contribute beta-glucans (soluble fibre) to add an extra property.

If run-off is a concern at higher addition rates, mix 50/50% with our Flaked Torrefied Oats.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	5.5% max	5.5% max	5.5% max
EXTRACT	245 L°/kg	65.0%	65.0%
COLOUR	2.0-7.0 EBC	2.2-7.8 EBC	1.3-3.4 °L
TN/TP	2.70%	17.0%	17.0%
SNR/KI/ST RATIO	11-14	14-17	14-17
DP/DPWK/LINTNER	500-1200 min IoB	730-1750 min WK	730-1750 min °L

No.19 FLOOR MALT®

Crisp has a long and proud tradition of producing the highest quality floor malt which continues to this day with malt still being produced in our № 19 floor malting at Great Ryburgh.

We produce small batch, handcrafted malt using techniques which date back to when the malting floors were built in the 1870s.

Our floor malting is one of the last still operating within the UK and the malt it produces is highly prized by brewers worldwide.

Floor malted Maris Otter® remains the quintessential ale brewing malt.

Although traditional in nature, the malt produced in № 19 is subject to the same stringent process and quality control procedures as the malt produced in our modern malting plants.

A full range of bespoke ale, lager and distilling floor malts plus other malted cereals can be made to order.

No.19 FLOOR MALT®

MARIS OTTER®

TASTING NOTES

LONGER, GENTLE GERMINATION & KILNING IMPARTS UNIQUE & HIGHLY VALUED FLAVOURS & AROMAS

COLOUR (IoB)
5.0 – 7.0

BEER STYLES	USAGE RATE	RECIPE
Best bitter, porters, barley wines	*80 – 100%*	*Crisp Barley Wine* *See page 122*

The № 19 floor at our Great Ryburgh maltings dates back to when Crisp began and has been producing malt virtually uninterrupted since the late 19th century.

We take our superior Maris Otter® barley and malt it in the traditional way; hand turned, germinated slowly on the floors and kilned for over three days to maximise the robust flavours associated with Maris Otter® Ale Malt. The result is a rich malt of superior quality; a true celebration of heritage and malting knowhow.

TYPICAL ANALYSIS

This is a bespoke product therefore no typical analysis is available.

ORGANIC MALTS

ORGANIC ALE MALT | ORGANIC EXTRA PALE MALT
ORGANIC CRYSTAL MALT

TASTING NOTES

FLAVOURS ARE THE SAME AS THEIR NON-ORGANIC COUNTERPARTS

Crisp's Organic Malt fully complies with the strict regulations which govern the qualification of foods as 'organic'. These rules and systems, having their basis in EU law, apply not only to the handling and processing of the organic barley at the malting plant, but also through the supply chain from the condition of the land sown and the provenance of the seed through to cultivation and harvesting.

TYPICAL ANALYSIS

ORGANIC ALE MALT

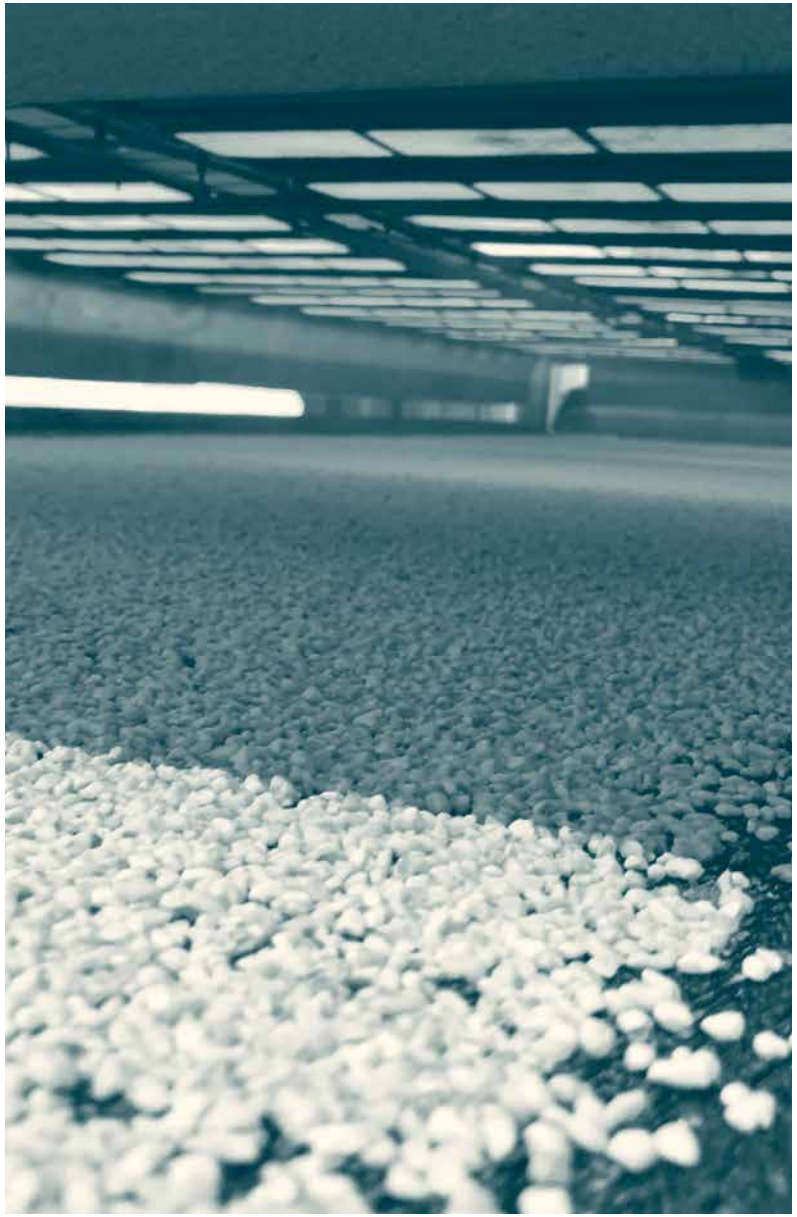
PARAMETER	IoB	EBC	ASBC
MOISTURE	4.0% max	4.0% max	4.0% max
EXTRACT	308 L°/kg	81.5%	81.5%
COLOUR	4.5-7.0 EBC	5.0-7.5 EBC	2.3-3.3 °L
TN/TP	1.70%	10.6%	10.6%
SNR/KI/ST RATIO	37-44	42-50	42-50

ORGANIC EXTRA PALE MALT

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.5% max	4.5% max	4.5% max
EXTRACT	308 L°/kg	81.5%	81.5%
COLOUR	2.5-4.0 EBC	2.8-4.5 EBC	1.5-2.2 °L
TN/TP	1.70%	10.6%	10.6%
SNR/KI/ST RATIO	37-44	42-50	42-50

ORGANIC CRYSTAL MALT

PARAMETER	IoB	EBC	ASBC
MOISTURE	5.0% max	5.0% max	5.0% max
EXTRACT	270 L°/kg	72.0%	72.0%
COLOUR	150-170 EBC	165-190 EBC	165-190 °L



NON-MALTED CEREALS

Our selection of non-malted cereals are made using torrefying and micronising techniques to gelatinise the starchy endosperm which means the cereal doesn't need to be pre-cooked before it is used in your mash tun. In addition, all of the flaked products don't need to be milled either.

Some non-malted cereals can add protein for head retention, body and mouthfeel and others will lighten the colour and allow for super pale, crisp beers to be developed.

They can also be used in distilling in the mash tun as a sugar substrate for the production of innovative craft spirits.

TORREFIED WHEAT

TASTING NOTES

SLIGHT GRAIN

BEER STYLES	USAGE RATE	SHELF LIFE
All styles. Main benefit is improved head retention	*10% max*	*6 months in dry and pest free conditions*

Torrefied Wheat has long been used by brewers up and down the UK to provide additional head potential on all beer styles. The higher molecular weight proteins and glycoproteins are head positive and also promote mouthfeel. It is especially useful when base malts are particularly low in nitrogen/ protein.

Torrefied Wheat has a very slightly grain character to it.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	10.0% max	10.0% max	10% max
EXTRACT	310 L°/kg	82.0%	82.0%

FLAKED TORREFIED BARLEY

TASTING NOTES

SLIGHTLY MORE HARSH FLAVOUR/BITE THAN TORREFIED WHEAT

BEER STYLES	USAGE RATE	SHELF LIFE
All styles. Main benefit is improved head retention. Suited to stouts for bite.	*10% max*	*6 months in dry and pest free conditions*

Flaked Torrefied Barley consists of barley grains that have been cooked at high temperature, resulting in gelatinisation of the starchy endosperm. Adding it promotes head retention and adds body to the finished beer. Its flavour is slightly stronger than its wheat counterpart. It does not require milling before being added to the mash, and retains its husk so can be used as an alternative to wheat in beers where the recipe already has a lot of huskless grains.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	10.0% max	10.0% max	10.0% min
EXTRACT	308 L°/kg	81.0%	81.0%

FLAKED TORREFIED MAIZE

TASTING NOTES

CORN FLAKES, CORN

BEER STYLES	USAGE RATE	SHELF LIFE
Continental lagers, prohibition lager	*Up to 25%*	*6 months in dry and pest free conditions*

RECIPE

Crisp Pre-Prohibition Lager see page 98

Flaked Torrefied Maize consists of maize grits that have been micronized at high temperatures which bursts open the starches and thus gelatinises the maize. It lightens wort and can add a unique corn flake-like sweetness to beers.

Maize can also be used by distillers to create bourbon style whisky without needing to pre-cook the maize. Crisp's Flaked Torrefied Maize is GM-free.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	8.5% max	8.5% max	8.5% max
EXTRACT	328 L°/kg	86.5%	86.5%

FLAKED TORREFIED RICE

TASTING NOTES

DRYNESS & CRISP FINISH

BEER STYLES	USAGE RATE	SHELF LIFE
Light lagers	*Up to 25%*	*6 months in dry and pest free conditions*

RECIPE

Crisp Low Gluten Pale Ale see page 103

Flaked Torrefied Rice consists of rice grains that have been cooked at high temperature, resulting in gelatinisation of the starchy endosperm, and then flaked. It lightens wort colour, reduces protein levels and imparts a characteristic dryness to finished beers.

Rice has low gluten so can be used for crafting low gluten products.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	8.5% max	8.5% max	8.5% max
EXTRACT	305 L°/kg	80.5%	80.5%

FLAKED TORREFIED OATS

TASTING NOTES

SMOOTH, CREAMY MOUTHFEEL

BEER STYLES	USAGE RATE	SHELF LIFE
Stouts, NEIPAs	*Up to 25%*	*6 months in dry and pest free conditions*

RECIPE

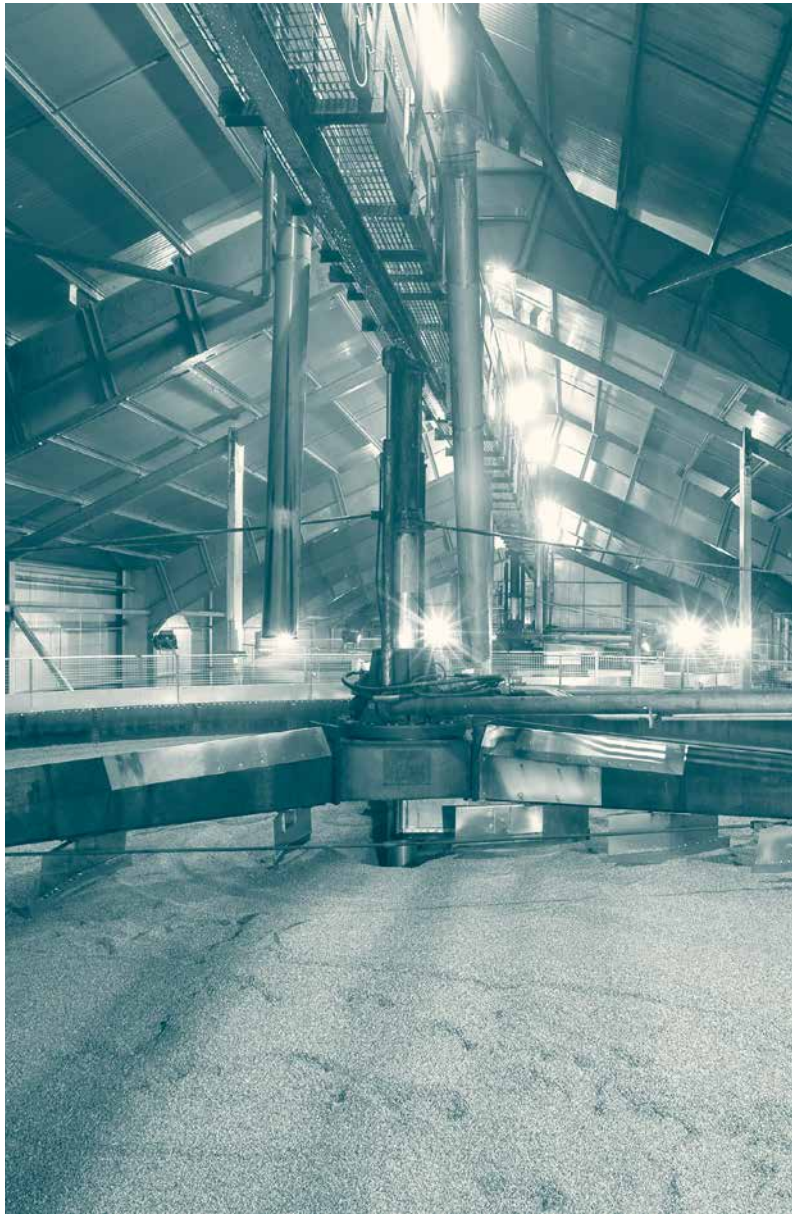
Crisp Oatmeal Stout see page 120

Flaked Torrefied Oats consist of husked oat grains that have been cooked at high temperature, resulting in gelatinisation of the starchy endosperm, and then flaked. They will give a smooth, creamy mouthfeel to finished beers.

The presence of oat husk can assist with wort separation, especially if the grist contains naked grains such as Malted Rye, Naked Oat Malt or Wheat Malt.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	11.0% max	11.0% max	11.0% max
EXTRACT	292 L°/kg	77.0%	77.0%



DISTILLING MALT

Crisp have been making distilling malt in Scotland for over 40 years. We now have two maltings, one in the traditional brewing town of Alloa and the other in the heart of Speyside at Portgordon. Between them, they cater for the malt requirements of Scotch Whisky production; plain, peated and high diastatic.

Over the years we've forged long lasting partnerships with farmers in Morayshire, Aberdeenshire and Fife, to grow low nitrogen (protein) distilling varieties which allows us to produce flavourful distilling malts that are prized not just in Scotland but also in Japan, the USA and Europe.

Our peating process on Speyside ensures the fullest absorption of 'reek' by the grain during the peat burn. Whereas with some dry smoked peated malts the flavour and aroma quickly fades over a short time, our method produces a lasting rich peat smoke character in the malt and so it can be transported all over the world without issue.

To cater to small and large distillers alike, our plain pot still and peated malts are available in bulk, one tonne or 25kg bags.

PREMIUM POT STILL MALT

TASTING NOTES

NEUTRAL MALT FLAVOUR

PSY

410 Litres of alcohol – per tonne

Made from spring distilling approved varieties, our Premium Pot Still Malt is GN free to avoid any ethyl carbamate issues in the still. Flavourful and high alcohol yielding, this malt is the workhorse of many a Scottish distillery. The north east of Scotland produces especially low nitrogen barley which translates into excellent spirit yield in the distillery.

With enough diastatic power to convert itself and other malts, you can combine it with our speciality malts to create complex and layered whiskies.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.3%		
SOLUBLE EXTRACT AS IS	78.6%	80%	80%
FERMENTABILITY	87.2%	n/a	n/a
PSY	410 laa/t	n/a	n/a
TN (MALT)	1.45%	9.0%	9.0%
SNR	38.0	43.0	43.0
FRIABILITY	93%		

PEATED POT STILL MALT

TASTING NOTES

PEAT SMOKE, PHENOLIC

PSY

410 Litres of alcohol – per tonne

Utilising peat from Aberdeenshire and the same spring barley as our Premium Pot Still Malt, we slowly peat our malt to give fullest absorption of phenols by each grain. This results in a depth of flavour that will not fade in storage and will provide that hallmark peat character in your whisky.

Our heavy peated malt is measured at upwards of 50 ppm of total phenol.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	4.3%		
SOLUBLE EXTRACT AS IS	78.6%	80%	80%
FERMENTABILITY	87.2%	n/a	n/a
PSY	410 laa/t	n/a	n/a
TN (MALT)	1.45%	9.0%	9.0%
SNR	38.0	43.0	43.0
FRIABILITY	93%		

HIGH DIASTATIC POWER (HDP) MALT

TASTING NOTES

NEUTRAL FLAVOUR

DIASTATIC POWER

160°IoB (dry)/600°WK/176°Lintner

From barley grown in central Scotland and malted at our Alloa maltings, our HDP Malt is used to produce grain whisky as well as other spirits where the majority of the grain bill lacks enzymes for conversion. At just 10% addition, this malt will convert any starch–rich cereal such as wheat, rice or maize.

This can be used at normal malt mashing temperatures with our flaked products to produce American-style whiskies. HDP Malt is known as Distillers Malt in the USA.

TYPICAL ANALYSIS

PARAMETER	IoB	EBC	ASBC
MOISTURE	6.5%		
DU	60		
DP	160°IoB (dry)	600°WK	176°Lintner

OUR DISTRIBUTION NETWORK

We've partnered with knowledgeable, approachable and trusted distributors around the world.

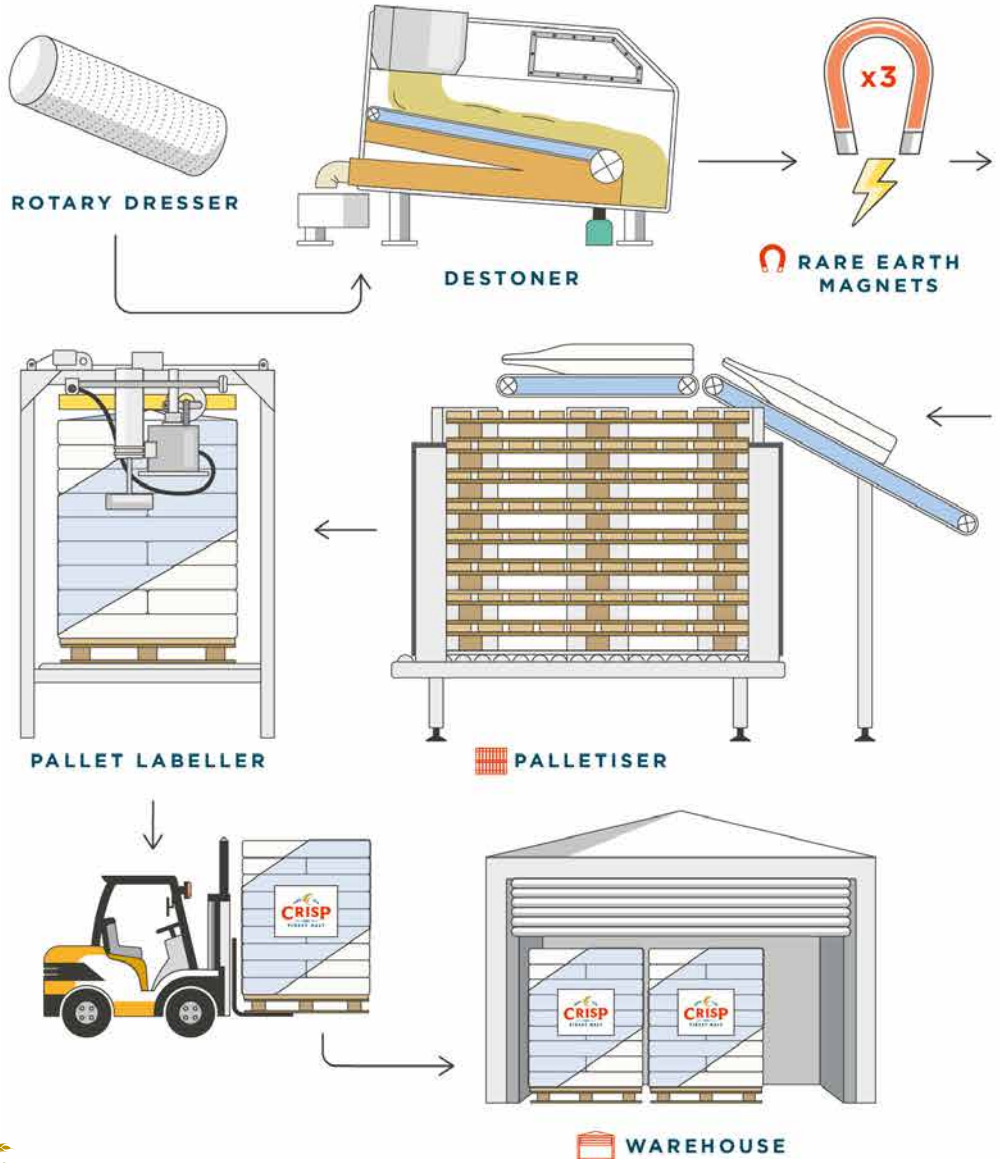
In regions where we can't physically be there, our distributors are hand-picked to ensure the high levels of customer service, product quality and technical support offered to our local brewers and distillers is continued to fellow brewers and distillers overseas.

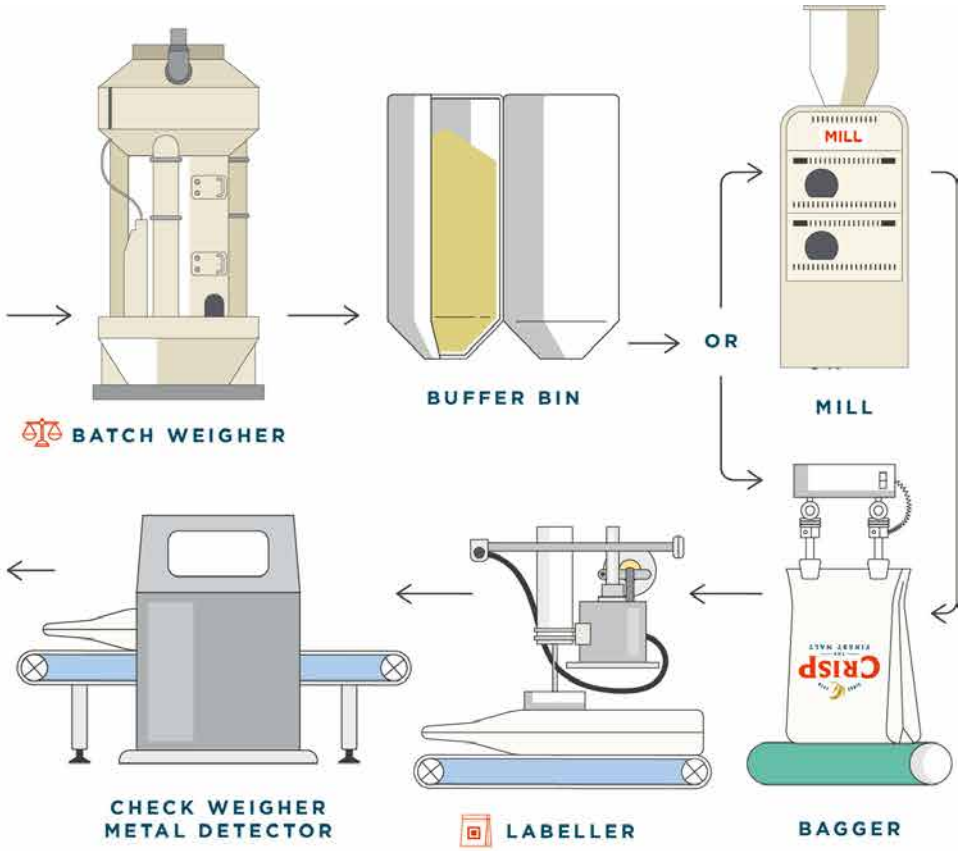
Get in Touch

Please email us on ***export@crispmalt.com****, with your name, location, annual quantities and contact information and we will introduce you to your local distributor*

PRODUCT PACKAGING

Our state-of-the-art sack malt packaging plant ensures our bagged malt arrives at each and every customer in the best condition possible.





Our Packaging Line

Three rare earth magnets prevent any metal particles passing through to the packaging line.

The Weigher controls product flow and changeovers.

Sacks are labelled with batch details and warehouse barcodes. QR codes link to the malt analysis CoA through the Crisp App.

Palletising is automated and for best possible pallet stability they're wrapped in heavy duty film.

Warehousing is managed using a stock/location barcode system. All stock is scanned to dispatch allowing full traceability.

RECIPES

Our master brewer Carl Heron, has been mashing, boiling and fermenting away on our pilot kit to bring you these recipes.

The calculated malt weights and liquor volumes are for a 10brl brew at a commercial efficiency, but we've also put the % contribution by each malt so that you can scale the recipe to suit your brew length.

We've included a lot of different styles to showcase the tremendous range of malts that Crisp has to offer. Feel free to use the recipes as they are presented or use them as a jumping off point for your imagination.

HAPPY BREWING!

RECIPE INDEX

RECIPE	MALTS	PAGE
Amber Ale	Amber Malt	109
Barley Wine	Nº 19 Maris Otter®	122
Best Bitter	Light Crystal (Crystal 150)	111
Brown Ale	Brown Malt	117
Dark Mild	Low Colour Chocolate Malt	114
English ESB	Finest Maris Otter® Ale Malt	112
German Kolsch	Clear Choice® Extra Pale	101
German Maibock	Light Munich Malt	102
German Pilsner	German Pilsen Malt	97
Golden Ale	Cara Gold Malt	105
IPA	Extra Pale Malt	106
Imperial Stout	Black Malt	121
Irish Stout	Roast Barley	119
London Porter	Chocolate Malt	118
Low Gluten Pale Ale	Flaked Torrefied Rice	103
Mild	Light Crystal (Crystal 150)	113
NEIPA	Clear Choice® Malt Ale	107
Oatmeal Stout	Flaked Torrefied Oats	120
Oaty Pale Ale	Naked Oat Malt	104
Pre-Prohibition Lager	Flaked Torrefied Maize	98
Ruby	Dark Crystal (Crystal 400)	116
Session Bitter	Cara Malt	110
Strong Mild	Medium Crystal (Crystal 240)	115
Table Beer	Dextrin Malt	100
Victorian Steampunk Ale	Chevallier® Heritage Malt	108
Vienna Lager	Vienna Malt	99

CRISP GERMAN PILSNER

Crisp, noble and refined | ABV 4.2% | IBU 21 | OG 1040 SG

The Pilsner style takes a lifetime to master. There is nowhere to hide with this deceptively simple recipe so only the most well-made and consistent malts should be used on this style. Our German Pilsner Malt doesn't need step or decoction mashing and will deliver a beautiful white head and clear beer, as befits the style.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1040 SG*
FINAL GRAVITY:	*1007 SG*
IBUs:	*21*
COLOUR *(EBC/SRM)*:	*5.5 / 3*
BREWHOUSE EFFICIENCY:	*85%*

INGREDIENTS

MALTS

	(kg)	*%*
GERMAN PILSEN	*244*	*97*
VIENNA	*7*	*3*
TOTAL	***251***	

YEAST

DIAMOND LAGER

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*63°C / 145°F*
COLLECTION TEMP:	*12°C / 54°F*
FERMENTATION TEMP:	*14°C / 57°F*
MASH LIQUOR VOL *(LITRES)*:	*680*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

Carl's Top Tip

"Reducing the wort temperature to 80°C prior to late hop addition will ensure that the fine aromas of the noble Tettnanger hop can be appreciated in the finished beer."

HOPS

	(g)	*Contribution%*	*Alpha Acid%*	*Addition*
MAGNUM	*412*	*32.5*	*13.5*	*Start of boil*
MAGNUM	*412*	*32.5*	*13.5*	*Middle*
HERSBRUCKER	*856*	*15*	*3*	*Flame out*
TETTNANGER	*622*	*20*	*5.5*	*Chill to 80°C then add (stand 15 mins)*

CRISP PRE-PROHIBITION LAGER

High hop and corn-like sweetness | ABV 4.8% | IBU 21 | OG 1044 SG

This recipe draws from the pre-prohibition era in US brewing history and features our Europils Malt and Flaked Maize to lend grainy and sweet-corn flavours respectively. Substantial hop additions give a moderate bitterness and the low mash temperature gives a lingering dry finish.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1044 SG*
FINAL GRAVITY:	*1007 SG*
IBUs:	*21*
COLOUR *(EBC/SRM)*:	*5 / 2.5*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*63°C / 145°F*
COLLECTION TEMP:	*17°C / 63°F*
FERMENTATION TEMP:	*20°C / 68°F*
MASH LIQUOR VOL *(LITRES)*:	*759*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
EUROPILS	*223*	*78*
FLAKED T MAIZE	*58*	*22*
TOTAL	***281***	

YEAST

WLP029 KOLSCH

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
CASCADE	*734*	*30*	*7*	*Start of boil*
CITRA	*411*	*30*	*12.5*	*Middle*
EUKANOT	*221*	*20*	*15.5*	*Flame out*
CITRA	*274*	*20*	*12.5*	*Flame out*

Carl's Top Tip

"Torrefied Flaked Maize is pre-gelatinised so no need to have a cereal cooker, just add straight to the mash."

CRISP VIENNA LAGER

Dry, smooth and bready | ABV 4.8% | IBU 20 | OG 1044 SG

The Vienna Lager was first originated by Anton Dreher in Vienna in 1841, the style being defined by the toasty character of the Vienna Malt. This version is light in body and dry in finish making it a very drinkable brew. The Perle and Styrian hops give a soft, delicate bitterness in perfect balance to the malt.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1044 SG*
FINAL GRAVITY:	*1007 SG*
IBUs:	*20*
COLOUR *(EBC/SRM)*:	*9 / 4.5*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*63°C / 145°F*
COLLECTION TEMP:	*13°C / 55°F*
FERMENTATION TEMP:	*15°C / 59°F*
MASH LIQUOR VOL *(LITRES)*:	*760*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
GERMAN PILSEN	*86*	*30*
VIENNA	*195*	*70*
TOTAL	***281***	

YEAST

GERMAN STYLE LAGER

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
PERLE	*652*	*30*	*7.5*	*Start of boil*
STYRIAN EAGLE	*337*	*30*	*14.5*	*Middle*
AURORA	*435*	*20*	*7.5*	*Flame out*
STYRIAN EAGLE	*225*	*20*	*14.5*	*Flame out*

Carl's Top Tip

"Mashing in at a lower temperature will give a more fermentable wort and a crisper finish to the beer."

CRISP TABLE BEER

Rounded body with floral citrus hops | ABV 2.5% | IBU 20 | OG 1031 SG

Low ABV beers are a tricky recipe to get right. They can often end up very thin and lacking in mouthfeel. The key is to have lots of non-fermentable sugars to add body, which is exactly what this hefty addition of Dextrin Malt achieves. We've also added great drinkability by utilising a range of fruit forward American aroma hops.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1031 SG*
FINAL GRAVITY:	*1012 SG*
IBUs:	*20*
COLOUR *(EBC/SRM)*:	*4 / 2*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*68°C / 154°F*
COLLECTION TEMP:	*17°C / 63°F*
FERMENTATION TEMP:	*20°C / 68°F*
MASH LIQUOR VOL *(LITRES)*:	*554*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
EXTRA PALE	*163*	*80*
DEXTRIN	*42*	*20*
TOTAL	***205***	

YEAST

LAGER

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
AMARILLO	*543*	*30*	*9*	*Start of boil*
CASCADE	*699*	*30*	*7*	*Middle*
MOSAIC	*272*	*20*	*12*	*Flame out*
AMARILLO	*362*	*20*	*9*	*Flame out*

Carl's Top Tip

"Mashing slightly thicker (2.2:1) with a higher temperature will reduce the amount of fermentable sugar which will help control ABV and give body to the beer."

CRISP GERMAN KOLSCH

Clean, balanced and brilliantly clear | ABV 4.4% | IBU 25 | OG 1041 SG

The Kolsch style is all about balancing malt, hops and the delicate fruit character of the speciality Kolsch yeast. Another key characteristic is brilliant clarity and this is achieved with our Clear Choice®, polyphenol free malt, which won't throw a chill haze. A beautifully refreshing, crystal clear lager.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1041 SG*
FINAL GRAVITY:	*1007 SG*
IBUs:	*25*
COLOUR *(EBC/SRM)*:	*1.3 / 0.6*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*63°C / 145°F*
COLLECTION TEMP:	*17°C / 63°F*
FERMENTATION TEMP:	*20°C / 68°F*
MASH LIQUOR VOL *(LITRES)*:	*719*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
CLEAR CHOICE® EXTRA PALE	*258*	*97*
VIENNA	*8*	*3*
TOTAL	***266***	

YEAST

KOLSCH

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
HALLERTAU BLANC	*582*	*30*	*10.5*	*Start of boil*
HUELL MELON	*873*	*30*	*7*	*Middle*
HUELL MELON	*582*	*20*	*7*	*Flame out*
MANDARINA BAVARIA	*479*	*20*	*8.5*	*Flame out*

Carl's Top Tip

"A lager fermented with an ale yeast, keep an eye on the top temperature on this one."

CRISP GERMAN MAIBOCK

Fruity with a malt kick | ABV 6.5% | IBU 21 | OG 1061 SG

A strong, German lager with accentuated fruit from the Munich Malt and a clean fermentation courtesy of the lager yeast and cold fermentation. A simple infusion mash is adequate given the well modified nature of our German Malt, which originates in our Crisp Hamburg maltings.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1061 SG*
FINAL GRAVITY:	*1011 SG*
IBUs:	*21*
COLOUR *(EBC/SRM)*:	*9 / 4.7*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*67°C / 153°F*
COLLECTION TEMP:	*13°C / 55°F*
FERMENTATION TEMP:	*15°C / 59°F*
MASH LIQUOR VOL *(LITRES)*:	*1065*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
GERMAN PILSEN	*314*	*80*
LIGHT MUNICH	*80*	*20*
TOTAL	***394***	

YEAST

GERMAN BOCK LAGER

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
STYRIAN EAGLE	*342*	*30*	*15*	*Start of boil*
AURORA	*734*	*30*	*7*	*Middle*
CELEIA	*1141*	*20*	*3*	*Flame out*
STYRIAN EAGLE	*228*	*20*	*15*	*Flame out*

Carl's Top Tip

"The Light Munich in this recipe will deliver wonderful malty depth."

CRISP LOW GLUTEN PALE ALE

Delicate and light with tropical fruit | ABV 3.8% | IBU 22 | OG 1037 SG

By utilising flaked cereals that don't contain gluten it is possible to drastically reduce the gluten content in beer. In this recipe we use our flaked rice and maize which have been pre-cooked in our torrifying process. The result is a very light beer in colour and body with a delicate hop bitterness from some new UK varieties. A summer thirst quencher.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1037 SG*
FINAL GRAVITY:	*1008 SG*
IBUs:	*22*
COLOUR *(EBC/SRM)*:	*6.4 / 3.2*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*65°C / 149°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*645*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
CLEAR CHOICE® EXTRA PALE	*183*	*75*
FLAKED T MAIZE	*33*	*15*
FLAKED T RICE	*23*	*10*
TOTAL	***239***	

YEAST

SAFALE US-05

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
PILOT	*633*	*30*	*8.5*	*Start of boil*
JESTER	*672*	*30*	*8*	*Middle*
OLICANA	*897*	*40*	*8*	*Flame out*

Carl's Top Tip

"Mash this brew for 90 minutes and send the finished beer away to Murphy & Son, Brewlab or SureBrew for a gluten test, it must be below 20ppm to be safe to drink for Coeliacs."

CRISP OATY PALE ALE

Floral and piney with malt richness | ABV 4% | IBU 24 | OG 1039 SG

This is our English Pale Ale recipe but with a twist; the addition of Naked Oat Malt to lend body and texture. A late addition of Slovenia Aurora gives a floral and pine character to this very drinkable of ales.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1039 SG*
FINAL GRAVITY:	*1008 SG*
IBUs:	*24*
COLOUR *(EBC/SRM)*:	*15.5 / 7.5*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*64°C / 147°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*704*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
BEST ALE	*214*	*86*
CRYSTAL 100	*11*	*4*
NAKED OAT	*36*	*10*
TOTAL	***261***	

YEAST

WEST COAST PALE ALE

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
FIRST GOLD	*782*	*30*	*7.5*	*Start of boil*
MINSTREL	*978*	*30*	*6*	*Middle*
AURORA	*1118*	*40*	*7*	*Flame out*

Carl's Top Tip

"Oats give up soluble fibre to the beer giving a nice smooth finish and enhanced body."

CRISP GOLDEN ALE

Quaffable summer ale | ABV 4.5% | IBU 20 | OG 1043 SG

This classic Golden Ale is all about showcasing hops without any caramel sweetness. The Cara Gold achieves the golden colour without any caramel sweetness but also lends the beer some body and a rounded mouthfeel despite the dry finish. Perfect on cask, for a quaffable summer ale.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1043 SG*
FINAL GRAVITY:	*1008 SG*
IBUs:	*20*
COLOUR *(EBC/SRM)*:	*10.5 / 5*
BREWHOUSE EFFICIENCY:	*80%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*66°C / 151°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*741*
LIQUOR / MASH RATIO:	*2.5 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
BEST ALE	*261*	*90*
CARA GOLD	*35*	*10*
TOTAL	***296***	

YEAST

WINDSOR ALE

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
FIRST GOLD	*652*	*30*	*7.5*	*Start of boil*
MINSTREL	*815*	*30*	*6*	*Middle*
MINSTREL	*543*	*20*	*6*	*Flame out*
EAST KENT GOLDINGS	*502*	*20*	*6.5*	*Flame out*

Carl's Top Tip

"The 3°C free rise in fermentation temperature encourages yeast growth in the first 24 to 36 hours in FV."

CRISP IPA

Classic English hops and strong bready malt | ABV 4.7% | IBU 25 | OG 1043 SG

This is our version of the original English India Pale Ale with our workhorse Best Ale Malt and some Munich Malt to add a light toast and bready quality. The beer is well attenuated like its Indian forebears. Hops dominate in this timeless style.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1043 SG*
FINAL GRAVITY:	*1007 SG*
IBUs:	*25*
COLOUR *(EBC/SRM)*:	*1.5 / 0.8*
BREWHOUSE EFFICIENCY:	*80%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*63°C / 145°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*750*
LIQUOR / MASH RATIO:	*2.5 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
EXTRA PALE	*285*	*95*
LIGHT MUNICH	*15*	*5*
TOTAL	***300***	

YEAST

LONDON ALE

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
SOVEREIGN	*1482*	*40*	*5.5*	*Start of boil*
EAST KENT GOLDINGS	*627*	*20*	*6.5*	*Middle*
ERNEST	*1254*	*40*	*6.5*	*Flame out*

Carl's Top Tip

"Use DWB, a blend of brewing salts that "Burtonise" water to give the typical dry finish and accentuated bitterness of this beer style."

CRISP NEIPA

Juice driven with a creamy body | ABV 6.5% | IBU 15 | OG 1062 SG

The New England IPA style embraces haze with the addition of ten percent Naked Oat Malt. These provide, body and turbidity but we utilise our polyphenol free malt to reduce the likelihood of oxidative darkening of the beer in package.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1062 SG*
FINAL GRAVITY:	*1012 SG*
IBUs:	*15*
COLOUR *(EBC/SRM)*:	*10.5 / 5*
BREWHOUSE EFFICIENCY:	*80%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*65°C / 149°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*1109*
LIQUOR / MASH RATIO:	*2.5 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins + 30 mins stand*

YEAST

LALBREW NEW ENGLAND

INGREDIENTS

MALTS	*(kg)*	*%*
CLEAR CHOICE® ALE	*321*	*75*
MALTED WHEAT	*62*	*15*
NAKED OAT	*61*	*10*
TOTAL	***444***	

Carl's Top Tip

"Clear Choice® base malt will prevent oxidative darkening of this beer style during shelf-life."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
UK CASCADE	*87*	*5*	*7*	*Middle*
CALYPSO	*49*	*5*	*12.5*	*Middle*
CALYPSO	*293*	*30*	*12.5*	*Flame out (stand 30 mins)*
JARRLYO	*222*	*30*	*16.5*	*Flame out (stand 30 mins)*
UK CASCADE	*524*	*30*	*7*	*Flame out (stand 30 mins)*

CRISP VICTORIAN STEAMPUNK ALE

Fruit, marmalade and rustic hops | ABV 5.5% | IBU 35 | OG 1051 SG

We first brewed for the Craft Brewers Conference (CBC) in 2018. This recipe combines the old world and new. We utilise Chevallier® as the base malt to give a rich, robust, marmalade and malty base and layer on top the classic California Common hops, Northern Brewer. We've added an Australian twist with Vic Secret hops making this a truly well-travelled ale.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1051 SG*
FINAL GRAVITY:	*1008 SG*
IBUs:	*35*
COLOUR *(EBC/SRM)*:	*23 / 12*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*68°C / 154°F*
COLLECTION TEMP:	*15°C / 59°F*
FERMENTATION TEMP:	*17°C / 62°F*
MASH LIQUOR VOL *(LITRES)*:	*809*
LIQUOR / MASH RATIO:	*2.5 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *90 mins*

YEAST

CALIFORNIA COMMON

Carl's Top Tip

"To further develop flavour and colour, increase the boil time on the recipe to 90 mins."

INGREDIENTS

MALTS

	(kg)	*%*
CHEVALLIER®	*245*	*76*
LIGHT MUNICH	*50*	*15*
CRYSTAL 150	*25*	*7*
LOW COL CHOCOLATE	*4*	*1*
TOTAL	***324***	

HOPS

	(g)	*Contribution%*	*Alpha Acid%*	*Add*
NORTHERN BREWER	*198*	*25*	*9*	*Start of boil*
NORTHERN BREWER	*198*	*25*	*9*	*Middle*
VIC SECRET	*119*	*25*	*15*	*10 mins before end*
VIC SECRET	*119*	*25*	*15*	*Flame out*

CRISP AMBER ALE

Amber colour with malty, dry caramel finish | ABV 4.1% | IBU 25 | OG 1040 SG

The Amber Malt in this recipe will colour the beer and shine through with a malty, dry caramel finish. Expect moderate hop bitterness with classic USA bittering hops and a finish of floral and piney Aurora and delicate spice from the Perle hops.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1040 SG*
FINAL GRAVITY:	*1008.5 SG*
IBUs:	*25*
COLOUR *(EBC/SRM)*:	*16 / 8*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*67°C / 153°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*701*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

YEAST

ENGLISH ALE

Carl's Top Tip

"The higher mash temperature on this brew will enhance the mouthfeel of the final beer."

INGREDIENTS

MALTS

	(kg)	*%*
BEST ALE	*234*	*91*
CRYSTAL 150	*9*	*3*
AMBER	*9*	*3*
CARA	*8*	*2.5*
ROAST BARLEY	*1*	*0.5*
TOTAL	***261***	

HOPS

	(g)	*Contribution%*	*Alpha Acid%*	*Add*
CHINOOK	*235*	*15*	*13*	*Start of boil*
CENTENNIAL	*340*	*15*	*9*	*Start of boil*
AURORA	*582*	*20*	*7*	*Middle*
AURORA	*728*	*25*	*7*	*End*
PERLE	*728*	*25*	*7*	*End*

CRISP SESSION BITTER

Highly drinkable. Light caramel and fruity | ABV 3.7% | IBU 20 | OG 1037 SG

Session bitters were designed to be highly drinkable with low ABV to slake the workers' thirst. The Cara Malt adds body and also some fruit notes to the ale which is well supported by using a characterful British Ale yeast.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1037 SG*
FINAL GRAVITY:	*1008 SG*
IBUs:	*20*
COLOUR *(EBC/SRM)*:	*16 / 8*
BREWHOUSE EFFICIENCY:	*80%*

INGREDIENTS

MALTS	*(kg)*	*%*
BEST ALE	*223*	*90*
CRYSTAL 150	*12*	*4.5*
CARA	*15*	*5*
ROAST BARLEY	*1*	*0.5*
TOTAL	***251***	

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*66°C / 151°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*631*
LIQUOR / MASH RATIO:	*2.5 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

YEAST

ENGLISH ALE

Carl's Top Tip

"The combination of slightly higher mash temperature and Cara Malt will give this beer more body and depth."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
ADMIRAL	*326*	*20*	*15*	*Start of boil*
TARGET	*621*	*40*	*10.5*	*Middle*
FLYER	*621*	*40*	*10.5*	*Flame out*

CRISP BEST BITTER

Toffee, caramel and raisin notes | ABV 4.4% | IBU 26 | OG 1043 SG

The addition of Crystal Malts to English bitters started after WWI and the best versions are served on cask. Our recipe uses Crystal 150 to provide toffee, caramel and raisin notes balanced out by a smorgasbord of classic and modern English hops.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1043 SG*
FINAL GRAVITY:	*1009 SG*
IBUs:	*26*
COLOUR *(EBC/SRM)*:	*21 / 11*
BREWHOUSE EFFICIENCY:	*85%*

INGREDIENTS

MALTS	*(kg)*	*%*
BEST ALE	*233*	*85*
CRYSTAL 150	*21*	*7*
AMBER	*12*	*4*
CARA	*12*	*3.5*
ROAST BARLEY	*2*	*0.5*
TOTAL	***280***	

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*66°C / 151°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*23°C / 73°F*
MASH LIQUOR VOL *(LITRES)*:	*756*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

YEAST

WINDSOR ALE

Carl's Top Tip

"The higher fermentation top temperature on this beer will encourage the yeast to produce fruity esters."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
ADMIRAL	*424*	*30*	*15*	*Start of boil*
BRAMLING CROSS	*848*	*30*	*7.5*	*Middle*
ENDEAVOUR	*565*	*20*	*7.5*	*Flame out*
KEYWORTHS MID-SEASON	*565*	*20*	*7.5*	*Flame out*

CRISP ENGLISH ESB

Bold Maris Malt body with caramel | ABV 5.5% | IBU 30 | OG 1052 SG

This Strong bitter is a great recipe to let our heritage Maris Otter® barley showcase its malt character to the fullest. Highly drinkable with a good balance between our malts and classic English hop varieties, this beer is darkened and sweetened with caramel notes by the Crystal, Amber and just a touch of Roast Barley to deepen the reddish hues.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1052 SG*
FINAL GRAVITY:	*1009 SG*
IBUs:	*30*
COLOUR *(EBC/SRM)*:	*23 / 12*
BREWHOUSE EFFICIENCY:	*80%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*66°C / 151°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*879*
LIQUOR / MASH RATIO:	*2.5 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
MARIS OTTER® ALE	*321*	*92*
CRYSTAL 150	*18*	*4.5*
AMBER	*12*	*3*
ROAST BARLEY	*2*	*0.5*
TOTAL	***353***	

YEAST

LALLEMAND LONDON ESB

Carl's Top Tip

"A 20 minute steep in the copper prior to casting the wort will extract aromas of lavender, spice, honey and thyme from the East Kent Goldings hops."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
CHALLENGER	*1397*	*40*	*7*	*Start of boil*
FUGGLE	*889*	*20*	*5.5*	*Middle*
EAST KENT GOLDINGS	*1505*	*40*	*6.5*	*Flame out*

CRISP MILD

Sessionable caramel sweetness | ABV 3.5% | IBU 18 | OG 1036 SG

Crystal 150 has a sweet caramel taste and aroma and works well in this beer along with the darker roasted malts, making a pleasant sessionable mild.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1036 SG*
FINAL GRAVITY:	*1009 SG*
IBUs:	*18*
COLOUR *(EBC/SRM)*:	*15 / 8*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*66°C / 151°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*621*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS	*(kg)*	*%*
VIENNA	*194*	*85*
CRYSTAL 150	*15*	*6*
BROWN	*8*	*3*
WHEAT	*13*	*6*
TOTAL	***230***	

YEAST

ENGLISH ALE

Carl's Top Tip

"Mash this brew for 90 minutes to ensure full conversion as the Vienna Malt has fewer amylase enzymes than regular pale malts."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
TARGET	*419*	*30*	*10.5*	*Start of boil*
PHOENIX	*419*	*30*	*10.5*	*Middle*
PHOENIX	*279*	*20*	*10.5*	*Flame out*
EAST KENT GOLDINGS	*451*	*20*	*6.5*	*Flame out*

CRISP DARK MILD

Subtle hops with light sweetness | ABV 4% | IBU 18 | OG 1040 SG

Five different malts make up the grist for this dark and delicious mild, expect lightly roasted coffee aromas and dark chocolate balanced with pleasant sweetness and subtle hopping.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1040 SG*
FINAL GRAVITY:	*1009 SG*
IBUs:	*18*
COLOUR *(EBC/SRM)*:	*32 / 16*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*65°C / 149°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*23°C / 73°F*
MASH LIQUOR VOL *(LITRES)*:	*697*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

YEAST

NOTTINGHAM ALE

INGREDIENTS

MALTS	*(kg)*	*%*
BEST ALE	*212*	*83*
CRYSTAL 240	*11*	*4*
AMBER	*6*	*2*
LOW COL CHOCOLATE	*20*	*7*
WHEAT	*10*	*4*
TOTAL	***259***	

Carl's Top Tip

"60g/hl of a nice spicy T90 dry hop will put a nice twist on the aroma of this malty beer."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
PILOT	*518*	*30*	*8.5*	*Start of boil*
PHOENIX	*419*	*30*	*10.5*	*Middle*
GODIVA	*391*	*20*	*7.5*	*Flame out*
FIRST GOLD	*391*	*20*	*7.5*	*Flame out*

CRISP STRONG MILD

Deep toffee malt with a pine nose | ABV 4.6% | IBU 20 | OG 1046 SG

A powerful mild but with the balance you would expect from this style, not too roasted or coffee like. The Crystal 240 brings a treacle toffee flavour and aroma and the chocolate provides depth and balance to the sweetness and body.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1046 SG*
FINAL GRAVITY:	*1010 SG*
IBUs:	*20*
COLOUR *(EBC/SRM)*:	*32 / 16*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*67°C / 153°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*23°C / 73°F*
MASH LIQUOR VOL *(LITRES)*:	*796*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

YEAST

ENGLISH ALE

INGREDIENTS

MALTS	*(kg)*	*%*
BEST ALE	*256*	*88*
CRYSTAL 240	*23*	*7*
CHOCOLATE	*6*	*2*
AMBER	*10*	*3*
TOTAL	***295***	

Carl's Top Tip

"Add brewing salts to achieve a chloride:sulphate ratio of 2:1 to give a perception of sweetness on the palate to balance the dark malt flavours."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
CHALLENGER	*466*	*20*	*7*	*Start of boil*
NORTHDOWN	*384*	*20*	*8.5*	*Start of boil*
GOLDINGS	*815*	*30*	*6*	*Middle*
PIONEER	*425*	*30*	*11.5*	*Flame out*

CRISP RUBY

Dried vine fruits and deep malt | ABV 5% | IBU 23 | OG 1047 SG

The deep red hue of this beer promises warmth and complexity. The malt bill is designed to bring dried vine fruits and all the hops are dark berry fruits. Expect malty depth with subtle hop aroma and bitterness.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1047 SG*
FINAL GRAVITY:	*1008 SG*
IBUs:	*23*
COLOUR *(EBC/SRM)*:	*34 / 17*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*66°C / 151°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*23°C / 73°F*
MASH LIQUOR VOL *(LITRES)*:	*815*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

YEAST

WINDSOR ALE

INGREDIENTS

MALTS	*(kg)*	*%*
BEST ALE	*268*	*90*
CRYSTAL 400	*24*	*7*
BROWN	*7*	*2*
ROAST BARLEY	*3*	*1*
TOTAL	***302***	

Carl's Top Tip

"Add the crushed Roasted Barley on top of the mash for this brew, then sparge through it to get the deep ruby colour."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
COLUMBUS	*351*	*30*	*16*	*Start of boil*
CLUSTER	*500*	*20*	*7.5*	*Middle*
ENDEAVOUR	*1339*	*50*	*7*	*Flame out*

CRISP BROWN ALE

Toasted, nutty and full | ABV 4.7% | IBU 26 | OG 1044 SG

This Brown Ale is a caramel forward, malt driven dark ale without the roasted character of a porter. Crystal, Brown and Chocolate Malts give a lovely blend of toffee, nutty and biscuit flavours with a dark-reddish brown colour.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1044 SG*
FINAL GRAVITY:	*1008 SG*
IBUs:	*26*
COLOUR *(EBC/SRM)*:	*28 / 14*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*65°C / 149°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*23°C / 73°F*
MASH LIQUOR VOL *(LITRES)*:	*770*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

YEAST

WINDSOR ALE

INGREDIENTS

MALTS	*(kg)*	*%*
MARIS OTTER®	*240*	*85*
CRYSTAL 150	*9*	*3*
BROWN	*19*	*6*
CHOCOLATE	*6*	*2*
WHEAT	*11*	*4*
TOTAL	***285***	

Carl's Top Tip

"The Maris Otter® in this recipe will give a pleasant biscuit/malt backbone to this great beer style."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
FIRST GOLD	*908*	*30*	*7*	*Start of boil*
PILGRIM	*605*	*30*	*10.5*	*Middle*
GOLDINGS	*706*	*20*	*6*	*Flame out*
PHOENIX	*404*	*20*	*10.5*	*Flame out*

CRISP LONDON PORTER

Restrained roast and chocolate caramel | ABV 6.2% | IBU 30 | OG 1058 SG

The Porter name derives from the London workers who drank this particular brew in the 1800s. This is a classic English version of the style featuring our Chocolate Malt to give a roasted character but without any astringent burnt character. Replace Best Ale with Chevallier for a truly authentic 1800s version!

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1058 SG*
FINAL GRAVITY:	*1010 SG*
IBUs:	*30*
COLOUR *(EBC/SRM)*:	*44 / 22*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*63°C / 145°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*23°C / 73°F*
MASH LIQUOR VOL *(LITRES)*:	*1010*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS

	(kg)	*%*
BEST ALE	*314*	*85*
CRYSTAL 400	*13*	*3*
BROWN	*16*	*4*
CHOCOLATE	*16*	*4*
RYE	*14*	*4*
TOTAL	***373***	

YEAST

LALLEMAND ESB

Carl's Top Tip

"The speciality malts in this recipe will add complexity, the rich flavours will be layered and be discovered as you enjoy the beer."

HOPS

	(g)	*Contribution%*	*Alpha Acid%*	*Addition*
NORTHDOWN	*978*	*30*	*7.5*	*Start of boil*
PILGRIM	*699*	*30*	*10.5*	*Middle*
TARGET	*466*	*20*	*10.5*	*Flame out*
FIRST GOLD	*652*	*20*	*7.5*	*Flame out*

CRISP IRISH STOUT

Rich, roasted coffee and chocolate | ABV 4.8% | IBU 30 | OG 1046 SG

Roasted Barley has become strongly associated with Irish stout since the mid 20th century when the Irish brewers deviated from the London style which used Brown Malt instead. Drinkability is increased by layering Brown, Chocolate and Roast Barley and by not finishing too dry.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1046 SG*
FINAL GRAVITY:	*1009 SG*
IBUs:	*30*
COLOUR *(EBC/SRM)*:	*76 / 39*
BREWHOUSE EFFICIENCY:	*75%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*66°C / 151°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*927*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

INGREDIENTS

MALTS

	(kg)	*%*
BEST ALE	*272*	*80*
BROWN	*7*	*2*
CHOCOLATE	*7*	*2*
ROAST BARLEY	*33*	*9*
WHEAT	*23*	*7*
TOTAL	***342***	

YEAST

NOTTINGHAM ALE

Carl's Top Tip

"The Roasted Barley in this recipe brings bite and astringency to this classic style."

HOPS

	(g)	*Contribution%*	*Alpha Acid%*	*Addition*
TARGET	*1863*	*80*	*10.5*	*Start of boil*
PHOENIX	*466*	*20*	*10.5*	*Flame out*

CRISP OATMEAL STOUT

Creamy, smooth and roasted | ABV 4.2% | IBU 18 | OG 1043 SG

Our version of the classic stout is heavy on the torrefied oats with a 10% addition lending in the beer a smooth slickness. The Brown, Crystal and Black Malts give a full roasted and chocolate flavour and the medium mash temperature leads to a moderate fullness in the end.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1043 SG*
FINAL GRAVITY:	*1010 SG*
IBUs:	*18*
COLOUR *(EBC/SRM)*:	*50 / 25*
BREWHOUSE EFFICIENCY:	*85%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*65°C / 149°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*21°C / 70°F*
MASH LIQUOR VOL *(LITRES)*:	*773*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

YEAST

LONDON ESB

INGREDIENTS

MALTS	*(kg)*	*%*
BEST ALE	*217*	*80*
BROWN	*6*	*2*
CRYSTAL 400	*6*	*2*
BLACK	*18*	*6*
FLAKED T OATS	*39*	*10*
TOTAL	***286***	

Carl's Top Tip

"Use brewing salts to get a chloride:sulphate ratio of 2:1 for this beer."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
JARRYLO	*275*	*30*	*16*	*Start of boil*
JARRYLO	*275*	*30*	*16*	*Middle*
JARRYLO	*367*	*40*	*16*	*Flame out*

CRISP IMPERIAL STOUT

Intense dark fruit and roast | ABV 11% | IBU 30 | OG 1097 SG

The biggest of the stouts, this version packs intense flavours of dark fruit and roasted character from the Brown and Black Malts and a layer of caramel from the Crystal Malt. British Minstrel at flame out lends spiced berries in flavour, and strong hop bitterness comes from the First Gold and Admiral.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1097 SG*
FINAL GRAVITY:	*1012 SG*
IBUs:	*30*
COLOUR *(EBC/SRM)*:	*99 / 50*
BREWHOUSE EFFICIENCY:	*75%*

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*63°C / 145°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*25°C / 77°F*
MASH LIQUOR VOL *(LITRES)*:	*1927*
LIQUOR / MASH RATIO:	*2.7 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *60 mins*

YEAST

FERMENTIS SAFALE S-33

INGREDIENTS

MALTS	*(kg)*	*%*
BEST ALE	*597*	*85*
CRYSTAL 240	*23*	*3*
BLACK	*62*	*8*
BROWN	*31*	*4*
TOTAL	***713***	

Carl's Top Tip

"A big beer like this needs lots of yeast pitched into it, go for at least 1.5 times your normal rate and oxygenate the wort if you can, yeast food will also help the beer reach final gravity."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
ADMIRAL	*843*	*50*	*14.5*	*Start of boil*
FIRST GOLD	*699*	*20*	*7*	*Middle*
MINSTREL	*1223*	*30*	*6*	*Flame out*

CRISP BARLEY WINE

Rich, intense and complex malt | ABV 10% | IBU 25 | OG 1090 SG

Malting floor Nº 19 at our Norfolk maltings is where it all started for us back in 1870. The Maris Otter® barley we malt on the floor today enjoys the benefit of a slow, three day kilning, which intensifies the rich, malty flavours you'll find in this barley wine. Bottle condition and age for a special occasion.

BASICS

BATCH SIZE *(LITRES)*:	*1630*
BATCH SIZE *(UK BARRELS)*:	*10*
ORIGINAL GRAVITY:	*1090 SG*
FINAL GRAVITY:	*1012 SG*
IBUs:	*25*
COLOUR *(EBC/SRM)*:	*22 / 11*
BREWHOUSE EFFICIENCY:	*70%*

INGREDIENTS

MALTS	*(kg)*	*%*
Nº 19 MARIS OTTER®	*656*	*95*
CRYSTAL 100	*39*	*5*
TOTAL	***695***	

METHODS / TIMINGS

TEMPERATURES

MASH TEMP:	*65°C / 149°F*
COLLECTION TEMP:	*18°C / 64°F*
FERMENTATION TEMP:	*25°C / 77°F*
MASH LIQUOR VOL *(LITRES)*:	*1737*
LIQUOR / MASH RATIO:	*2.5 : 1*

TIMINGS

MASH: *60 mins* **BOIL:** *90 mins*

YEAST

SAFBREW S33

Carl's Top Tip

"Going for a gravity of 1.090 with an all malt mash will require sacrificing some yield, check the gravity in the copper as you run off and stop when you have the correct gravity, allowing for a two hour boil."

HOPS	*(g)*	*Contribution%*	*Alpha Acid%*	*Addition*
GOLDINGS	*1019*	*30*	*6*	*Start of boil*
PHOENIX	*582*	*30*	*10.5*	*Middle*
PHOENIX	*776*	*40*	*10.5*	*Flame out*

GET IN TOUCH

We love nothing more than visiting breweries and distilleries, talking to you about your process and getting hands on to help you get the very best out of Crisp malt.

We know this can only happen when we build strong relationships with our customers, we'd love to hear from you, understand your malt needs and show how our malts can make all the difference to your beers and spirits.

CHEERS!

Crisp Malt
Great Ryburgh, Fakenham
Norfolk NR21 7AS, England

+44 (0)1328 829 391
sales@crispmalt.com

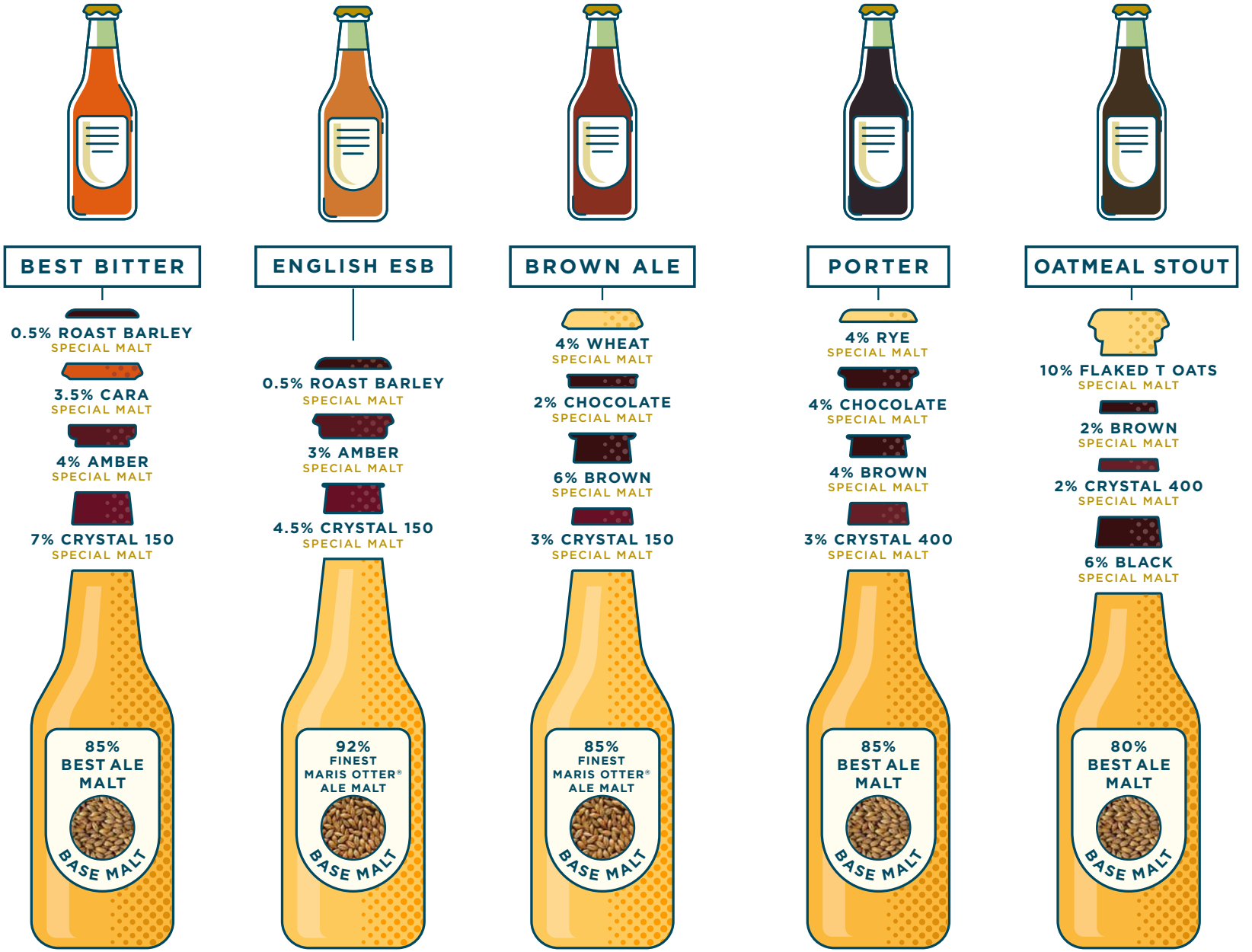
@CrispMalt @crispmaltings

CRISPMALT.COM

Photography credit - Page 70: Frances Brace, www.redflamecommunications.co.uk

Shelf life for our products is 12 months in dry and pest free conditions unless otherwise stated.
All specifications presented are average typical analysis values only.

BEER BUILDING BLOCKS



Recipe page 111

Recipe page 112

Recipe page 117

Recipe page 118

Recipe page 120

CRISPMALT.COM