



Muntons

PASSIONATE ABOUT MALT SINCE 1921



Hello

Muntons started back in 1921 and it's fair to say a lot has changed since then. Today, we are established as a leading supplier of Malt and Malted ingredients, providing the magic inside the very best global food & drink brands.





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**Spray
Dried**

**Band
Dried**

Extracts

**Flakes
& Flours**

**From our high-
quality British
malt, we make a
wide range of
ingredients**



**That serve brewing, distilling
and food customers across
continents, countries and
industries**

Our innovation centres enable us support customers and develop proactive innovation that supports our industries



Expertise
New Product
Development
Innovation
Market trends
Product reviews

Our innovation mindset isn't just restricted to our ingredients

Our Malt is 100% sustainable.

The Only Maltster to have set science-based targets to reduce greenhouse gas emissions by 45% (2010-2025)

First Maltster to commit to the Food Waste Reduction Roadmap

We don't waste anything. 99% of our waste is recycled.

2-5% of our profits are invested back into sustainability projects

Our energy is green, through our AD plant we produce green electricity for use on site and reduce our emissions by the equivalent of 2850 family cars a year.

Hand on heart, we are one of the Greenest maltsters.

 **And we can prove it too.**



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Join the brewing
REVOLUTION^{0%}N

with Muntions **new** Premium
Alcohol-Free Malt Extract



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A VERSATILE BASE
from which you can
create a wide range of
GREAT TASTING
alcohol free beers





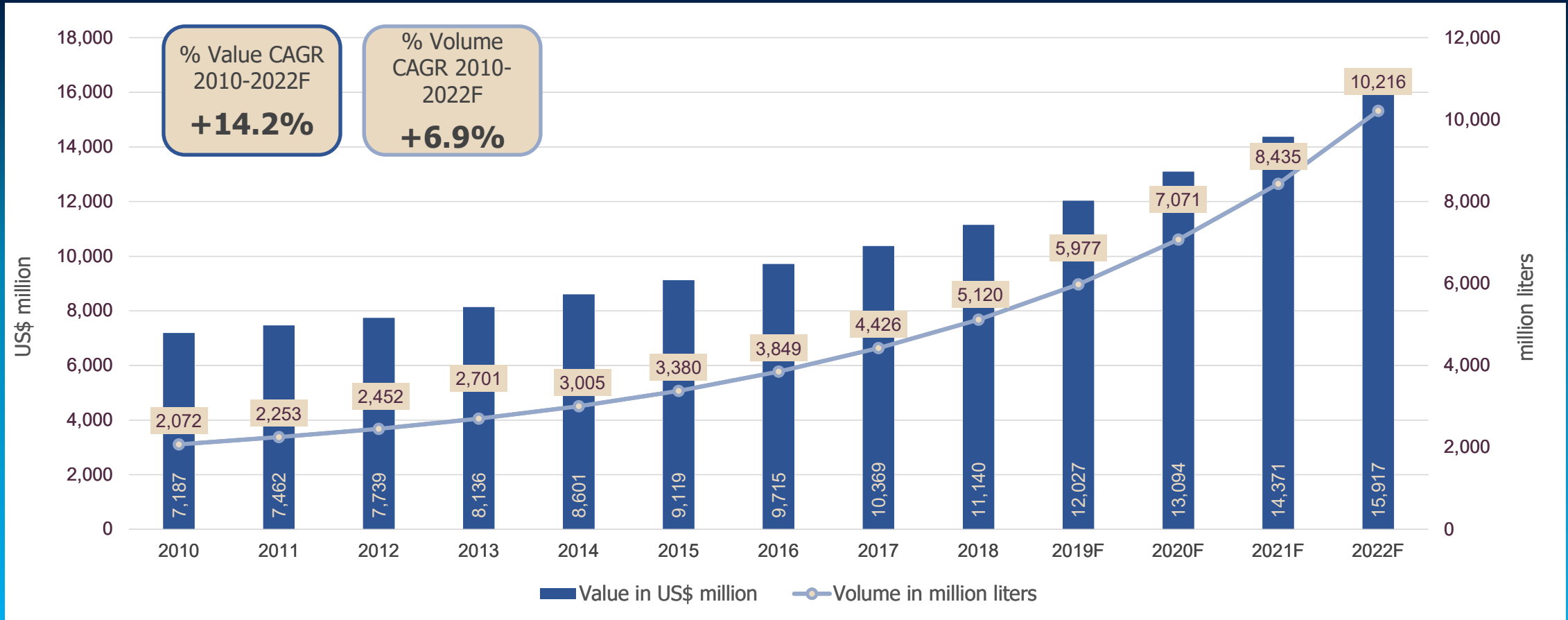
The rise of the **‘SOBER CURIOUS’**

- Sobriety is becoming a more popular lifestyle choice
- Adults aged 18-34 are most likely to drink No/Lo beer, and this will carry into their later years
- The rate of innovation in the Alcohol Free space is rapidly increasing, across all regions

“With the rise of low and no alcohol beer, the challenge brewers are facing is how to create the flavour profile of a true beer”

Sales are *SIGNIFICANT* and *RAPIDLY GROWING*

Non/low alcohol beer market now valued at over US\$15.9 billion



Source: Innova Market Insights – Food Metrix

Note: Value data are available for 30 global markets
Volume data are available for 22 global markets

WHAT is it?

MUNTONS PREMIUM ALCOHOL FREE MALT EXTRACT is made from Pale Brewing Malt and hops, modified using our proprietary process to give ***BODY, MOUTHFEEL & FERMENTED FLAVOURS.***

It makes achieving great tasting zero alcohol beers easy.





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HOW is it made?

To our high quality 100% British barley pale malt extract we add a blend of hops to give a mild bitterness and improve the foam stability of the product.

Using our signature process of heating and modifying wort sugars, we create a low sweetness product with a mild fermentation aroma & taste.

The ingredients declaration is simply
Hopped Barley Malt Extract (Barley, Hop Extract)



HOW can Brewer's use it?

Premium Alcohol Free Malt Extract is designed with the brewers creativity in mind. We have taken care to create a well-balanced canvas that is easy to use.

ROUTE 1:

Use in place of brewing malt, straight dilution into the copper. Brewer can create their recipe as they regularly would but without the requirement for yeast and fermentation and the benefit of being repeatable, fast and great tasting

ROUTE 2:

Use to dilute a finished beer down to desired ABV. Prevents the watery diluted taste that is often associated with No/Low Beer that uses this approach



WHAT equipment do I need?

The required equipment is a blending vessel with a hot water connection and a mixing system. Further a storage vessel with good cooling is required and a packaging system.

The production process requires:
Dilution, heating, cooling and preferably stabilisation.

Required

- Hot Water access
- Blending Tank
- Chiller unit
- Packaging Line
- Carbonation unit



It also works great for Malt Based BEVERAGES

- Simplicity of use
- Quick
- Adds depth of flavour
- Blends well with fruit flavours
- Reduced sweetness and reduced sugars
- Plant based



What else is good to know?

- LOW CALORIE: All dilutions between 12 – 20 kcal/100g
- NO ALCOHOL CONTENT 0.0% ABV

Shelf stable products

- Samples made with a preservative or pasteurisation step have shown to be microbiologically stable for up to 9 - 12 months
- Filtered beers show no sign of colloidal instability

Great solubility and handling

- The reduced solids of the extract (vs traditional malt extract) make the addition and handling easier than ever

Available in 25kg jerry can or 1 tonne IBC



Technical Product Details

Premium Alcohol Free Malt Extract declares as hopped barley malt extract in all applications that are classed as alcohol free products.

The typical nutritional composition is:

Energy:	250	kcal/100g
Protein:	4	g/100g
Carbohydrate:	58.9	g/100g
Sugar:	46	g/100g
Sodium:	12	mg/100g
Fat:	0.2	g/100g
Dietary Fibre:	<0.5	g/100g

Muntons Material Code:	
Prem. Alc. Free MX 25kg JC	86461
Prem. Alc. Free MX 1000kg IBC	86462

Description: Enzymically Modified and Hopped Liquid Malt Extract

Appearance: Brown slightly viscous syrup

Odour: Sweet, Mildly Acidic, Resinous

Taste: Sweet, Mild Malt Flavour, Bitter, Astringent, Mild Acidity

Ingredient Declaration: Barley Malt, Hop Extract

Allergen Information: Contains Gluten

Syrup Composition: Soluble extract of malted Barley, Water, Hop Extracts

Suggested Ingredient Declaration for Retail Product Labelling:
Hopped Barley Malt Extract (Barley, Hop Extract)

Analytical Specification (IOB Methodology) :

Colour @10% w/v	< 25 EBC
pH	< 5.5
IBU – 10% w/v	< 15
Refractometric Solids	66 - 70
Microbiological Specification	
Total Plate CFU/g	< 5000
Moulds CFU/g	< 100
Yeasts CFU/g	< 100
Coliforms CFU/g	< 10

Usage Rates (Route 1)

The Extract is designed to make a base for Alcohol free beers and beverages with good body and mouthfeel.

The usage rate varies depending on the style of beverage made:

Lager Style:	3.5 – 5	KG / HL
Ale Style:	4 – 6	KG / HL
Stout Style:	4 – 8	KG / HL
IPA Style:	5 – 7	KG / HL
Malt Beverage Style:	3 – 9	KG / HL
Soft Drink Style:	2.5 – 5	KG / HL



Applications

Recipe Suggestions

0% IPA 10HL

Premium Alcohol Free Extract 50KG

Cascade Hops 3KG

Citra Hops 5KG

Ascorbic acid 1KG

Potassium Sorbate 200mg/L

Simcoe Hops 8KG

Brewing Water 10HL

- Alkalinity 40ppm
- Calcium chloride 150ppm
- Calcium Sulphate 200ppm

Extract is diluted into 10HL of water and mixed with ascorbic acid.

Mixture is then boiled. Once the product reaches a rolling boil add the Cascade hops.

Continue to boil the product for 30 minutes.

After 30 minutes the heat is turned off and the Citra hops is added.

After 20min of contact the wort is chilled and moved to a sterile vessel

The Simcoe and potassium sorbate are added for 12 -72h at 5-10C.

Then the product is filtered and packaged.



Applications

Recipe Suggestions

<u>0.5% Lager</u>	<u>10HL</u>
Premium Alcohol Free Extract	50KG
Hallertau Mittelfruh Hops	2KG
Saaz Hops	3KG
Ascorbic acid	1KG
Potassium Sorbate	200mg/L
Beer/ Yeast Flavoring	0.05KG
Brewing Water	10HL
• Alkalinity	40ppm
• Calcium chloride	100ppm
• Calcium Sulphate	250ppm

Extract is diluted into 10HL of water and mixed with ascorbic acid.

This mixture is then boiled. Once the product reaches a rolling boil add the HMF hops.

Continue to boil the product for 30 minutes.

After 30 minutes the heat is turned off and the Saaz hops is added.

After 20min of contact the wort is chilled and moved to a sterile vessel

The potassium sorbate is added and the dilution is set to 5-10C.

The product is then blended 9:1 with a 5% ABV beer, the product is then immediately filtered and packaged.



Applications

Recipe Suggestions

Water Melon Carbonated Soft Drink

10HL Premium Malt Beverage Base 80KG

Ascorbic acid 1.5KG

Potassium Sorbate
200mg/L

Watermelon Flavoring 0.05KG

Strawberry Flavouring 0.025KG

Citric Acid 2.5KG

Potable Water 10HL

- Alkalinity 40ppm
- Calcium chloride 100ppm
- Calcium Sulphate 50ppm

Extract is diluted into 10HL of water and mixed with ascorbic acid, watermelon flavouring, citric acid and potassium sorbate.

The mixture is then filtered and carbonated.



Meet The Family



PREMIUM SOUR MALT EXTRACT – *Our innovative soured extract offers a simple, convenient way to introduce popular sour notes consistently, without the risk of plant contamination and is simple to replicate from batch to batch.*



PALE ALE MALT EXTRACT – *A brewing extract with enhanced levels of fermentability, ideal as a brew extender, to increase beer strength, enhance colour and help maintain yeast performance.*



WHEAT MALT EXTRACT – *Made from a blend of malted wheat and malted barley, carefully extracted to retain all of the characteristics of wheat malt, this offers an ideal way to improve head formation and retention and enhance body.*



ROASTED MALT EXTRACT – *Our roasted malt extract has strong, smoky and roasted flavours so use sparingly as even low level inclusions will bring out these distinctive flavour notes in your chosen beer style.*



ULTRA DARK MALT EXTRACT – *This brewing quality malt extract, made from selected roasted grains, introduces very intense colour with little flavour addition, ideal for colour adjustment.*



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Technical support

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Media support

Media assets are available on request

- Artwork assets
- Promotional Leaflet
- Email banner
- Social media graphic
- Beer Label Designs



"With the rise of low and no alcohol beer, the challenge brewers are facing is how to create the flavour profile of a true beer."

"The rise in No. 10 beer sales has increased, with large leading brands increasing production by 25% in 2018. This is a clear sign that consumers are ready to try No. 10 beers and this will carry into 2019 and beyond."

"This project has been one of the most challenging of my career, taking over 18 months to develop. It is a true testament to the passion and commitment of the team that we have achieved to create our Premium Alcohol Free Malt Extract."

BREWING INNOVATION with Muntons

Ingredient	Alcohol	Flavour	Body	Texture	Stability	Shelf Life
Water	High	Low	Low	Low	High	High
Grain	Medium	Medium	Medium	Medium	Medium	Medium
Hops	Low	High	Low	Low	High	High
Yeast	High	Low	Low	Low	High	High
Malt	High	Low	Low	Low	High	High
Alcohol Free Malt Extract	Low	High	High	High	High	High

WHAT do I need to do?

Take care to get it balanced



work?

...you buy!



Join the brewing
REVOLUTION%N
with Muntons **new** Premium
Alcohol-Free Malt Extract

A VERSATILE BASE TO ADD:

- ◆ MOUTHFEEL
- ◆ BODY
- ◆ TASTE



Are you ready to join the brewing

REVOLUTION[%]N ?

Q&A





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APPENDIX





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Process Flow



Composition

The ingredients used in the manufacture of the above product are Kilned Malted Barley, Water and Isomerised Hop Extract and Hop Extract.

The production process involves enzymatic hot water extraction of the malted barley, followed by filtration and concentration into syrup by vacuum evaporation. The syrup is then further processed with Catalase and addition of compressed air then blended with hop extracts.

Grist (Grain) Ratio:

Kilned Malted Barley (*White Base Malt*) 100 %

Composition of Final Product:

Soluble extract of malted barley 66.1 – 75.6 % (*Total Solids*)

Water 24.5 – 33.9 %

Isomerised Hop Extract 0.25 %

