24 the marshal 2019 - biab

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **36**
- SRM **36.3**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **15 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **28.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4.8 liter(s) / kg**
- Mash size **37.3 liter(s)**
- Total mash volume **45.1 liter(s)**

Steps

- Temp **67 C**, Time **100 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **37.3 liter(s)** of strike water to **71.9C**
- Add grains
- Keep mash **100 min** at **67C**
- Keep mash **10 min** at **75C**
- Sparge using **-0.7 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	MINCH MALT - Irish Ale Malt	5 kg *(64.4%)*	82 %	5
Grain	Bestmalz - Cara Munich Type II	0.25 kg *(3.2%)*	75 %	120
Grain	Roats Barley Malt	0.42 kg *(5.4%)*	50 %	1300
Grain	MINCH MALT - Irish Wheat Malt	1 kg *(12.9%)*	82 %	4
Grain	weyermann - abbey malt	0.5 kg *(6.4%)*	75 %	45
Grain	Bestmalz - Cara Aromatic	0.4 kg *(5.1%)*	78 %	50
Grain	Chocolate Malt	0.2 kg *(2.6%)*	73 %	900

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mandarina Bavaria	50 g	35 min	8 %
Aroma (end of boil)	Haliertauer Tradition	39.4 g	10 min	5.8 %

Yeasts

Name	Type	Form	Amount	Laboratory

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

WLP004 - Irish Ale Yeast	Ale	Liquid	1000 ml	White Labs

Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc	3 g	Boil	10 min