

- Gravity **17.7 BLG**
- ABV ---
- IBU **23**
- SRM **26.7**
- Style **Traditional Bock**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **27.6 liter(s)**

### Steps

- Temp **62 C**, Time **50 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **20.7 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **10 min** at **75C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Pilsen	3.95 kg (57.3%)	80.5 %	4
Grain	Minch - Irish Craft Pale Ale Malt	1.07 kg (15.5%)	80 %	7
Grain	Weyermann - Light Munich Malt	0.7 kg (10.2%)	85 %	20
Grain	bestmalz - rye	0.2 kg (2.9%)	80 %	6
Grain	Bestmalz - Cara Munich Type III	0.6 kg (8.7%)	75 %	160
Grain	Bestmalz - Cara Aroma Amber	0.268 kg (3.9%)	75 %	75
Grain	Black Barley (Roast Barley) whole	0.1 kg (1.5%)	50 %	1367

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	45 min	10.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
W-34/70	Lager	Slant	50 ml	Fermentis Saflager

## Extras

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