

Doppelbock

- Gravity **21.6 BLG**
- ABV **9.7 %**
- IBU **28**
- SRM **18.6**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **120 min**
- Evaporation rate **5 %/h**
- Boil size **16.4 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.25 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.2 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **70.8C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **78C**
- Sparge using **2.5 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Vienna	2.85 kg (46.2%)	80.5 %	9
Grain	BESTMALZ - Best Minich	2.2 kg (35.7%)	80.5 %	16
Grain	Abbey Malt Weyermann	0.45 kg (7.3%)	75 %	45
Grain	Melanoiden Malt	0.27 kg (4.4%)	80 %	39
Grain	Weyermann Caramunich 3	0.23 kg (3.7%)	76 %	150
Grain	Special B Malt	0.17 kg (2.8%)	65.2 %	315

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	25 g	60 min	7 %
Boil	Perle	15 g	20 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - 2308 Munich Lager	Lager	Slant	300 ml	Wyeast

Extras

Type	Name	Amount	Use for	Time
Water Agent	CaCl2	5 g	Mash	60 min