

Helles

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **23**
- SRM **4.3**
- Style **Munich Helles**

Batch size

- Expected quantity of finished beer **66 liter(s)**
- Trub loss **1 %**
- Size with trub loss **68 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **77.7 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **45 liter(s)**
- Total mash volume **60 liter(s)**

Steps

- Temp **78 C**, Time **5 min**
- Temp **65 C**, Time **60 min**

Mash step by step

- Heat up **45 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **5 min** at **78C**
- Sparge using **47.7 liter(s)** of **76C** water or to achieve **77.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	13 kg (86.7%)	82 %	4
Grain	Pszeniczny	1.5 kg (10%)	85 %	4
Grain	Viking Melanoidynowy	0.5 kg (3.3%)	70 %	60

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	50 g	60 min	3 %
Boil	lunga	25 g	60 min	13 %
Aroma (end of boil)	Saaz (Czech Republic)	100 g	20 min	3 %
Aroma (end of boil)	Saaz (Czech Republic)	100 g	1 min	3 %