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- Gravity **8.8 BLG**
- ABV **3.4 %**
- IBU **52**
- SRM **3.4**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.6 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **62 C**, Time **55 min**
- Temp **72 C**, Time **5 min**

Mash step by step

- Heat up **16.6 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **55 min** at **62C**
- Keep mash **5 min** at **72C**
- Sparge using **21.2 liter(s)** of **76C** water or to achieve **33 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2.5 kg (52.6%)	82 %	4
Grain	Weyermann pszeniczny jasny	0.5 kg (10.5%)	80 %	6
Grain	Viking Pale Ale malt	1.5 kg (31.6%)	80 %	5
Grain	Monachijski	0.25 kg (5.3%)	80 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau	30 g	60 min	4.5 %
Boil	Cascade	15 g	40 min	6 %
Boil	Challenger	35 g	25 min	7 %
Boil	Centennial	15 g	15 min	10.5 %
Boil	Cascade	15 g	5 min	6 %
Boil	Challenger	15 g	5 min	7 %
Boil	Centennial	15 g	5 min	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
munich classic	Ale	Dry	11 g	---