

- Gravity **14.5 BLG**
- ABV ---
- IBU **24**
- SRM **12**

Batch size

- Expected quantity of finished beer **31.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **33.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **39.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **25.1 liter(s)**
- Total mash volume **33.5 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	5 kg (59.7%)	81 %	5
Grain	Briess - Bonlander Munich Malt	1.44 kg (17.2%)	78 %	20
Grain	Weyermann pszeniczny jasny	0.24 kg (2.9%)	80 %	6
Grain	Briess - Munich Malt 20L	0.12 kg (1.4%)	74 %	80
Grain	Weyermann - Caramel Rye Malt	0.24 kg (2.9%)	74 %	175
Grain	Caraaroma	0.05 kg (0.6%)	78 %	400
Grain	Caraamber	0.05 kg (0.6%)	75 %	59
Grain	Weyermann - Pale Ale Malt	0.24 kg (2.9%)	85 %	7
Grain	Barley, Flaked	0.5 kg (6%)	70 %	4
Grain	Rye, Flaked	0.5 kg (6%)	78.3 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	70 min	15 %
Boil	Citra	6 g	40 min	12.4 %
Boil	Simcoe	10 g	15 min	13.1 %
Boil	Citra	6 g	10 min	12.4 %
Boil	Ahtanum	30 g	5 min	4 %