

Liquid Pain

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **50**
- SRM **25.6**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	5 kg (83.3%)	82 %	4
Grain	Oats, Flaked	0.5 kg (8.3%)	80 %	2
Grain	Carafa II	0.5 kg (8.3%)	70 %	1100
Adjunct	Gypsum	0.004 kg (0.1%)	1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Oktawia	20 g	30 min	7.1 %
Aroma (end of boil)	Oktawia	30 g	15 min	7.1 %
Dry Hop	Oktawia	50 g	7 day(s)	7.1 %
Boil	Michigan Copper	40 g	40 min	10 %
Dry Hop	Michigan Copper	60 g	7 day(s)	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	7 g	Fermentis