

## new hope

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- Gravity **16.1 BLG**
- ABV ---
- IBU **78**
- SRM **9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **66 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.4 liter(s)**
- Total mash volume **28.8 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **22.4 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Keep mash **0 min** at **78C**
- Sparge using **10.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	6 kg (93.8%)	85 %	7
Grain	Strzegom Karmel 30	0.25 kg (3.9%)	75 %	30
Grain	Strzegom Bursztynowy	0.15 kg (2.3%)	70 %	49

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zeus	30 g	60 min	15.5 %
Boil	Amarillo	20 g	30 min	9.5 %
Boil	Citra	15 g	20 min	12 %
Boil	Cascade	15 g	5 min	6 %
Whirlpool	Amarillo	10 g	0 min	9.5 %
Whirlpool	Citra	15 g	0 min	12 %
Whirlpool	Cascade	15 g	0 min	6 %
Dry Hop	Amarillo	60 g	7 day(s)	9.5 %
Dry Hop	Citra	30 g	7 day(s)	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis