

# HOPBY

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **33**
- SRM **7.2**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **11.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **5.3 liter(s)**
- Total mash volume **7 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**

## Mash step by step

- Heat up **5.3 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **8.1 liter(s)** of **76C** water or to achieve **11.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	0.8 kg (40%)	81 %	4
Grain	Monachijski	0.3 kg (15%)	80 %	16
Grain	Pszeniczny	0.5 kg (25%)	85 %	4
Grain	Viking Malt Karmelowy	0.15 kg (7.5%)	75 %	140
Sugar	Cukier kandyzowany belgijski biały	0.15 kg (7.5%)	--- %	0
Dry Extract	Briess DME - Golden Light	0.1 kg (5%)	95 %	8

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	15 min	14.3 %
Boil	Columbus/Tomahawk/Zeus	15 g	5 min	14.3 %
Boil	Falconer's Flight	15 g	1 min	10.7 %
Boil	Citra	30 g	1 min	12 %