

## 32 ale

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- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **83**
- SRM **5.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **63.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **30.9 liter(s)**
- Total mash volume **41.2 liter(s)**

### Steps

- Temp **66 C**, Time **40 min**
- Temp **69 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **30.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **69C**
- Keep mash **10 min** at **78C**
- Sparge using **42.7 liter(s)** of **76C** water or to achieve **63.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	10 kg (75.1%)	80 %	5
Grain	Weyermann - Carared	0.25 kg (1.9%)	75 %	45
Grain	Jęczmień palony	0.06 kg (0.5%)	5 %	985
Sugar	sacharoza	3 kg (22.5%)	--- %	---

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	150 g	60 min	13.5 %

### Notes

- zakwaszone do 5,5ph kwasem fosforowym, czubata łyżeczka herbaciana gipsu piwowarskiego, pół łyżeczki chlorku wapnia. 50l podgrzane do 70°C wrzucone słydy pale ale i carrared  
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